

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF VIRGINIA
RICHMOND DIVISION

THE TRUSTEES OF COLUMBIA
UNIVERSITY IN THE CITY OF
NEW YORK

v.

NORTONLIFELOCK INC.
f/k/a SYMANTEC CORPORATION

Civil Action No.:
3:13 CV 00808

April 19, 2022

DAY 6
EXPEDITED OVERNIGHT TRANSCRIPT

COMPLETE TRANSCRIPT OF JURY TRIAL
BEFORE THE HONORABLE M. HANNAH LAUCK
UNITED STATES DISTRICT COURT JUDGE

APPEARANCES:

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(The proceeding commenced at 8:19 a.m.)

THE CLERK: Day 6. Case Number 3:13 CV 808.

Trustees of Columbia University in the City of New York v.
NortonLifeLock Inc.

Columbia is represented by Garrard Beeney,
Dustin Guzior, Alex Gross, Jessica Ecker, John Erbach and
Dana McDaniel.

Norton is represented by Douglas Lumish, Michael
Morin and Dabney Carr.

Are counsel ready to proceed?

MR. BEENEY: Plaintiff is ready.

Good morning. Thank you.

MR. LUMISH: Norton is ready.

THE COURT: Good morning.

MR. LUMISH: Good morning.

THE COURT: I'm sorry to call you in early, but
it's important because I have to admit error.

Last night it was raised whether or not
Dr. Jaeger should be able to testify to the upper end of
his technical evaluation. And I had the opportunity last
night to reread my *Daubert* opinion, not my motions *in*
limine.

In my *Daubert* opinion, I found that Dr. Jaeger
used these three apportionment percentages, which counsel
for Norton referred to, and then reached an ultimate

1 apportionment percentage, which is essentially zero, which
2 I have excluded, and for very good reason.

3 In addressing, though, this 60 percent and the
4 14 percent figure, aside from what it is that I addressed
5 in my motions *in limine* one and three, I, in *Daubert*,
6 reached a different conclusion and specifically rejected
7 Columbia's attempt to exclude Dr. Jaeger's rebuttal
8 apportionment analysis. And this is at ECF Number 739 at
9 11.

10 I noted certain pieces of Dr. Jaeger's report,
11 in particular, suffice is sufficiently a technical
12 analysis. And I gave a couple of examples where I thought
13 that was appropriate in my *Daubert* opinion. And I did
14 that both with respect to the 60 percent and the
15 14 percent figure.

16 So to the extent that Norton wishes to elicit
17 testimony to the first two blocks, as we've been talking
18 about at the intermediate percentages, it may do so. But
19 it has to do so from a technical perspective, and that's
20 where, you know, the details are -- the devil is left to
21 the details.

22 But it is the case that Norton cannot offer any
23 ultimate apportionment percentage. And Dr. Jaeger has to,
24 obviously, remain within his opinion that he's already
25 given, and cannot expand on it. And can only reach his

1 testimony through what is a technical evaluation, not any
2 kind of economic or other marketing, or any other kind of
3 evaluation.

4 So I apologize for thinking only about the
5 motions *in limine*. I probably should give myself time to
6 think before I rule in any event. But now I'm getting it
7 right, and I apologize for the inconvenience to all of
8 you, all right?

9 MR. MORIN: We appreciate the clarification,
10 Your Honor, and we will, of course, abide by that.

11 THE COURT: All right. Fine.

12 MR. GUZIOR: Your Honor, may I address this just
13 very, very briefly?

14 THE COURT: Of course.

15 Go ahead and approach the podium.

16 MR. GUZIOR: Thank you, Your Honor.

17 I think what Your Honor said this morning - and
18 thank you, Your Honor, - is consistent with what we had
19 understood yesterday. We think Dr. Jaeger can talk about
20 the 14 percent number for SONAR that he bases on block
21 count data from the time of the hypothetical negotiation
22 where he uses 2013 block count data.

23 Where we're a little bit confused is the malware
24 detection number, the 60 percent, and I think 70 percent
25 that he assigns, because there is no technical aspect to

1 that opinion that's been disclosed. It's 100 percent
2 based on his statements about sales and marketing
3 material, and then Carey Nachenberg's testimony where he
4 said I think 70 and 60. And there isn't any disclosed
5 aspect to that opinion that would be a technical
6 apportionment.

7 And so, you know, we thought this was an issue
8 that would be resolved when Norton submits its Q and A
9 because we're very curious about how that first step will
10 be converted into a technical apportionment opinion,
11 consistent with Your Honor's *Daubert* order, ECF 739, and
12 the ruling on our motion *in limine*, number three,
13 Columbia's motion *in limine*, number three.

14 So although we understand Dr. Jaeger can talk
15 about the 13 to 14 percent for SONAR, but we're not sure
16 there's much more he can do than talk about that.

17 THE COURT: Well, in Footnote 8, I made a
18 finding that I couldn't accept the argument that
19 Dr. Jaeger just parrots Mr. Nachenberg. And I indicated
20 that the cases that Columbia presented were factually
21 distinct. And essentially, I said that I left that to
22 cross-examination. And so I don't know what you're
23 presentencing that is different than that.

24 MR. GUZIOR: And, Your Honor, I appreciate the
25 footnote. And you did say you can't find that he's just

1 parroted fact witness testimony, like in the cases we
2 cited. What I'm talking about is slightly different,
3 which if you look at Dr. Jaeger's report, and this is just
4 possibly one to three paragraphs, he doesn't have any
5 technical analysis that goes into the 60 and 70 percent.
6 He says I looked at sales and marketing material, and I
7 think what Mr. Nachenberg said is right.

8 And so, you know, consistent with the idea that
9 Dr. Jaeger should be talking about technology, having
10 admitted that never in his life has he done anything that
11 would call for any kind of economic analysis, we're just
12 not sure where that's going to come from unless it's an
13 opinion that hasn't previously been disclosed.

14 THE COURT: All right. Well, I will say that
15 the report with respect to the 60 percent figure is pretty
16 light, and so I'll hear from counsel how that relates to
17 something technical.

18 MR. GUZIOR: Thank you, Your Honor.

19 MR. MORIN: Your Honor, we thought, like you had
20 indicated, you already addressed this head on in the
21 *Daubert* motion. This is the same argument from the
22 *Daubert* motion.

23 I'll make two other points: One is if they want
24 to cross-examine and say the opinion is thin on that, he
25 will point -- and he talks about the marketing materials,

1 you're going to see testimony from Dr. Cole today where
2 he's going to point to a bunch of marketing materials, and
3 he will end up pointing to Mr. Nachenberg also.

4 Number two is Mr. Cole -- Dr. Cole's original
5 report in 2014 used those same numbers, so I think it's
6 fair game also to say it's supported by their own experts'
7 original numbers. The opinions mirror each other. There
8 is not a lot of depth there in the analysis. But it just
9 all sounds like cross-examination.

10 Mr. Guzior is an excellent cross-examiner. I'm
11 sure he's going to say the sum total of your basis for
12 this is X and Y, and he'll cross-examine on that point.

13 THE COURT: All right.

14 Well, you are going to submit questions in
15 advance. I will say I can't -- this is not the strength
16 of either expert's testimony, and I'm going to allow
17 cross-examination to the extent it's reasonably presented.

18 I have made clear that one difference is there
19 is an economic expert and there is not an economic expert.
20 And that's a pretty significant difference. And
21 Mr. Jaeger is the latter.

22 MR. MORIN: Correct.

23 THE COURT: So there is more leeway given to an
24 economic expert, right? And it's not the case that
25 necessarily a technical expert has the economic expertise

1 to disagree with somebody who's presenting economic
2 testimony, so I'll just take all of that into account.

3 But I will look at your -- at your submissions
4 carefully because it is -- we try to resolve these things
5 at the *Daubert* stage to the extent we can.

6 And I am going to say I do appreciate strong
7 advocacy, I really do, but I think you have heard me say,
8 Mr. Morin, and also, you, Mr. Lumish, I'm a little
9 concerned about how you have presented some of your
10 questions to the witnesses. Cross-examination is fair,
11 but it is not fair if you misrepresent what a witness has
12 said.

13 So I'm going to tell you, I think I should have
14 shored you up, but I think in your first examination of
15 Mr. Herskowitz you said that he had testified about a
16 particular part of an exhibit that was not the one that he
17 testified to. And you went down a whole row of questions.

18 And, you know, Columbia can object to that, and
19 maybe my memory was wrong, but I can tell you I have
20 noticed from you-all a predilection to say last year --
21 yesterday you said this happened in 2013, and then you
22 said this.

23 And what the witness testified to was that it
24 happened in 2015.

25 And maybe it's just an error, but I'm just

1 putting you on notice it has been very consistent in my
2 mind, and that's why I've started correcting what I think
3 are not accurate factual predicates.

4 And so I really -- I do appreciate strong
5 advocacy, but it doesn't have to rest on presenting facts
6 not in evidence.

7 MR. MORIN: We would never intentionally do so,
8 Your Honor. If we made a mistake, then we will -- and I
9 will be extra vigilant. And in the next couple of
10 witnesses, I'll be careful.

11 THE COURT: I am just going to say you both made
12 it, and more than one day, in my -- my reading of the
13 record.

14 So I'm saying this now -- Mr. Lumish, you look
15 confused. I can give you examples if you want me to.

16 But it just has to stop, especially with
17 experts. Do not present things as a predicate of a
18 question that are inaccurate. Just be really careful
19 about that.

20 MR. MORIN: I'll be extra careful. And I have
21 the next witnesses, and the last two on cross I'll try to
22 be extra careful on that knowing that --

23 THE COURT: You know, it's creative and it's a
24 strong cross, but if it's not based on what's really
25 before the jury, it's unduly prejudicial, all right?

1 MR. MORIN: Thank you, Your Honor.

2 One other question. It may be -- as I warned
3 you last time, it may be fairly late by the time we get
4 the Jaeger stuff together, so don't wait up for us, but
5 we'll send it before we go to sleep so that you wake up to
6 it in the morning.

7 For Q and A, meaning writing out the questions
8 and the answers, I tend to in my examinations when I write
9 them -- I teach trial advocacy at UVA, and we teach not
10 writing out the questions. I put the bullet points with
11 the answers. I want to follow Your Honor's orders, but if
12 the bullet points just state his testimony without
13 question and answer, question and answer, will that be
14 acceptable to Your Honor, or would you like us to put it
15 the question and the answer? And we'll do either, of
16 course, Your Honor.

17 THE COURT: So based on what I just said, I want
18 the question and --

19 MR. MORIN: You've got it. You've got it.
20 Okay. We'll do it, of course.

21 THE COURT: It's unusual, but I'm doing it in
22 this case.

23 MR. MORIN: So we'll submit *in camera*, and you
24 will have it by the time you wake up.

25 THE COURT: Perfect.

1 MR. MORIN: Thank you.

2 THE COURT: So we can take a recess.

3 (Recess taken.)

4 THE COURT: Are we ready to proceed?

5 MR. GROSS: Just one thing, if I may, Your
6 Honor?

7 THE COURT: Why don't you go ahead, if you're
8 going to speak, approach the podium.

9 MR. GROSS: Thank you, Your Honor.

10 THE COURT: Of course.

11 MR. GROSS: Just cognizant of Your Honor's
12 comments on the transcript for the Dacier video, Columbia
13 has prepared errata for two of the three videos. There
14 were no errors we could see, at least in the third video.

15 I just wanted to know if Your Honor would like
16 us to hand this up now or after the video?

17 THE COURT: That would be great if you hand it
18 up now. As you can tell, I'm a detailed gal.

19 MR. GROSS: And what we have done is we've
20 separately listed out the errata to the testimony that
21 Columbia has designated, and separately to the testimony
22 that Norton has designated. And I'll hand my colleagues a
23 copy of this right now.

24 MR. LUMISH: That's what I was going to ask for,
25 Your Honor. I haven't seen a copy. We may have as a

1 team.

2 THE COURT: All right.

3 MR. GROSS: Thank you, Your Honor.

4 THE COURT: Thank you very much.

5 MR. MORIN: We, of course, have no objections,
6 Your Honor.

7 THE COURT: Okay. Thank you for putting that on
8 the record.

9 You can bring them in.

10 (The jury is present in the courtroom.)

11 THE COURT: Good morning, everybody.

12 JURORS: Good morning.

13 THE COURT: All right. I think we're ready for
14 some video testimony, as we told you yesterday. So I will
15 allow the parties to introduce that to you.

16 MR. GROSS: Thank you, Your Honor.

17 Columbia calls as its next witness, Shane
18 Pereira, by videotape deposition. Mr. Pereira testified
19 as a 30(b)(6) witness on behalf of Norton on the following
20 topics:

21 The testing of SONAR/BASH by Norton, the use,
22 function, operation, structure, specifications, training
23 data and training process of SONAR/BASH, and the use of
24 machine learning with SONAR/BASH.

25 THE COURT: All right.

1 So I'm going to instruct you, as I have before,
2 that this video includes testimony that is offered both by
3 Columbia and by Norton, okay?

4 JURORS: Yes.

5 THE COURT: You can play the video, please.

6 (Videotaped deposition of Mr. Shane Pereira.)

7 THE COURT: Is that the conclusion of the video
8 testimony?

9 MR. GROSS: Yes, it is, Your Honor.

10 THE COURT: Does either side have any objection
11 to how it was presented?

12 MR. LUMISH: No objection, Your Honor.

13 THE COURT: No objection from Columbia either?

14 MR. GROSS: No objection, Your Honor.

15 THE COURT: All right.

16 MR. GROSS: Columbia calls its next witness,
17 Barry Laffoon, by videotaped deposition.

18 Mr. Laffoon was deposed twice in this case.
19 Once in 2014 and once in 2019, and two videos will be
20 played sequentially.

21 THE COURT: All right.

22 I'm going to ask, sir, next time you introduce
23 it, please come up to the podium. It's a little bit
24 harder to hear you from counsel table because you're away
25 from the microphone.

VIDEOTAPED DEP OF BARRY LAFFOON & CAREY NACHENBERG 1418

1 MR. GROSS: Apologies, Your Honor.

2 THE COURT: Thank you.

3 Again, I'm going to tell you-all that this video
4 includes testimony offered both by Columbia and by Norton.

5 (Videotaped deposition of Mr. Barry Laffoon.)

6 THE COURT: Is that the conclusion of the video
7 testimony from Mr. Laffoon?

8 MR. GROSS: Yes, it is, Your Honor.

9 THE COURT: Is there any objection to the way it
10 was presented?

11 MR. LUMISH: No objection, Your Honor.

12 THE COURT: Any objection at all?

13 MR. LUMISH: None, Your Honor.

14 MR. GROSS: And none from Columbia, Your Honor.

15 If we may proceed, Columbia calls its next
16 witness, Carey Nachenberg, by videotaped deposition.

17 THE COURT: All right.

18 (Videotaped deposition of Mr. Carey Nachenberg.)

19 THE COURT: Is that the conclusion of
20 Mr. Nachenberg's testimony?

21 MR. GROSS: Yes, it is.

22 THE COURT: Any objection to the testimony?

23 MR. LUMISH: No objection, Your Honor.

24 MR. GROSS: None from Columbia.

25 THE COURT: All right.

How do we proceed next?

MR. GUZIOR: Your Honor, Columbia's next witness is Dr. Cole. We may need three or four minutes to get the binders, but we're prepared to proceed.

THE COURT: All right. Why don't we take our first break now, and we'll come back at 10:20, all right?

I'll remind you, please, don't talk about anything about the case to others or among yourselves.

(Jury no longer present in the courtroom.)

THE COURT: All right. We'll take a recess and we'll return at 10:20.

With experts, I think, a few shorter breaks are better; although, I do feel for our jury. So we'll make sure they're doing fine through our CSO with the breaks.

So we will see you at 10:20.

(Recess taken.)

(The trial resumes on the next page.)

Eric Cole - Direct

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1 (The trial resumed at 10:21 a.m.)

2 (The jury is not present.)

3 THE COURT: Are we ready to proceed?

4 MR. GUZIOR: Columbia is ready, Your Honor.

5 MR. MORIN: Norton is ready, Your Honor.

6 THE COURT: Okay. Let's bring the jury in.

7 (The jury entered the courtroom.)

8 THE COURT: All right.

9 MR. GUZIOR: Columbia calls Dr. Eric Cole.

10 **ERIC COLE,**

11 called by the plaintiff, first being duly sworn, testified

12 as follows:

13 MR. GUZIOR: Your Honor, I have two copies of
14 Dr. Cole's slide presentation and a copy of his exhibits,
15 which is a copy of what chambers received last night. Can
16 I hand those to your courtroom deputy?

17 THE COURT: Yes, please.

18 MR. GUZIOR: And for the record, Your Honor,
19 I've also given copies to opposing counsel and to the
20 witness, Dr. Cole.

21 May I proceed, Your Honor?

22 THE COURT: Please.

23 **DIRECT EXAMINATION**

24 BY MR. GUZIOR:

25 Q Dr. Cole, good morning.

Eric Cole - Direct

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1 A Good morning.

2 Q Let's start with an introduction. Please introduce
3 yourself to our jury.

4 A Good morning, Your Honor, members of the jury. My
5 name is Eric Cole. I'm a resident of the state of
6 Virginia, and I'm a cybersecurity professional.

7 Q Can you please spell your name for our terrific court
8 reporter, sir?

9 A Eric, E-R-I-C, Cole, C-O-L-E.

10 Q Before we get into the details, I want to ask you a
11 few questions about your background. Did you prepare a
12 slide presentation to help the jury understand your
13 testimony today?

14 A Yes, I did.

15 Q And, Dr. Cole, let me show you the first slide in
16 your presentation. Does this summarize your employment
17 history, sir?

18 A Yes, at a high level, it does.

19 Q Where did you begin your career after college?

20 A After college, I began my career at the CIA, the
21 Central Intelligence Agency, where I worked at the office
22 of security, testing various products.

23 I then moved into a role for five years where I
24 was a professional hacker, responsible for finding
25 vulnerabilities, exposures, and breaking into various

Eric Cole - Direct

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1 computer systems.

2 Q Did you say a professional hacker?

3 A Yes, I did.

4 Q Why would the CIA want to pay someone to do that?

5 A For two reasons. One, the only way to really know
6 the security of your own systems is by trying to break in,
7 by finding the vulnerabilities and exposures before an
8 external adversary does. So I was responsible for
9 whenever we were rolling out new servers or systems at the
10 agency, I would essentially play the role of a hacker and
11 try to break in and find those exposures.

12 And then the second reason, which is fairly
13 obvious if you watch the news lately, is sometimes we do
14 need to perform some types of offensive operations and
15 need those skill sets.

16 Q What did you do after leaving the CIA?

17 A After the CIA, you'll notice on the slide there's
18 some gaps in years, and that's because during the dot-com
19 era, I worked for many different start-ups in which I
20 played different roles of chief security officer, chief
21 information officer, chief technology officer helping
22 organizations role out and implement effective
23 cybersecurity strategies.

24 Q What brought you to Lockheed Martin in 2005?

25 A In 2000, I started a company called TSGI, which

Eric Cole - Direct

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1 stands for The Sytex Group inc., and this was a government
2 contracting organization where I was responsible for the
3 research team, for licensing and acquiring different
4 technology that we needed for our contracts. And in 2005,
5 we were acquired by Lockheed Martin, and the CEO at the
6 time in 2005 -- there was a lot of things going on in
7 cybersecurity. There were a lot of changes with the
8 threats. So I was asked to stay on as a special advisor
9 to the executives to focus in on cybersecurity incidents
10 across all of Lockheed.

11 Q At Lockheed, did you work on any notable
12 cybersecurity incidents?

13 A Yes, I did, two in particular.

14 One you might have heard about, the Joint Strike
15 Fighter in the mid 2000s was hacked and compromised by a
16 foreign adversary. Within two hours, I was on an airplane
17 to Texas and spent almost two and a half months down there
18 doing incident response, identifying what the extent of
19 compromise was and what we needed to do to fix and
20 remediate.

21 Also with FBI Sentinel, when that program
22 started having some security issues and challenges, I was
23 brought in to evaluate what the solutions and gaps were,
24 look at whether we should build a technology in house or
25 license or buy third-party technology and then help to put

Eric Cole - Direct

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1 the security strategy back on track.

2 Q Now, what brought you to McAfee in 2009?

3 A In 2009 -- I'm foreshadowing a little bit of my
4 presentation, but you'll hear in a little bit, in 2009 it
5 was a very significant time for cybersecurity vendors like
6 McAfee. They were struggling in the marketplace.

7 So John McAfee and Dave Dewalt, the two founders
8 of McAfee asked if I would come on board to redesign,
9 rebuild, and reprioritize their entire product line to be
10 more competitive within the landscape.

11 Q And did McAfee compete with the defendant, Norton?

12 A Yes. At the time, we called them Symantec, but my
13 understanding in this case, Norton and Symantec are
14 synonymous. But yes, they were one of our prime
15 competitors during that time period.

16 Q In what product areas?

17 A The main product area was endpoint security, or what
18 we call antivirus or malware detection. And this was both
19 on the consumer side and on the enterprise side.

20 Q Why did you leave after only two years?

21 A When I was brought on, I was given a four-year
22 contract where the goal was to reposition McAfee's
23 products, make them one of the leaders and get them
24 acquired.

25 I actually accomplished that with a team.

Eric Cole - Direct

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1 Within two years, we were acquired by Intel. So once I
2 accomplished what I was brought on to do, I then moved on
3 to start my own company, Secure Anchor Consulting.

4 Q What type of work do you do at your own company,
5 Secure Anchor?

6 A At a broad level, Secure Anchor is a cybersecurity
7 consulting company. So we're brought in to help companies
8 build out security road maps, security health checks,
9 security assessments.

10 I also go in and give briefings to executives.
11 Tomorrow night I fly to Canada to give a keynote for an
12 executive board of manufacturers and also just help
13 organizations understand the challenges and implement
14 effective solutions.

15 Q And are there any private clients you have at Secure
16 Anchor that you're able to disclose?

17 A Yes. One of the areas we don't talk about that much
18 is Cyber Bodyguard where we're actually brought in by high
19 profile net worth individuals. A lot of our clients,
20 professional athletes, actors, high net worth individuals.
21 Normally, we can't reveal any of our clients, but since
22 I've worked with them for 15 years, I actually got special
23 permission to be able to say that I do the private
24 cybersecurity for the Gates family, for Bill and Melinda.

25 Q I see. Now, Dr. Cole, you seem to have a very active

Eric Cole - Direct

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1 social media presence with your company, Secure Anchor,
2 with videos and podcasts. Why do you do those things?

3 A There's two reasons. One is I'm a Virginia start-up
4 company. I currently have eight employees. So we
5 continually want to make people aware of our services.
6 Sometimes some of our clients call us the best kept secret
7 in cybersecurity. So I hire different firms to help us
8 produce content. I do a podcast show, Life of a CISO,
9 which stands for Chief Information Security Officer, and
10 we just try to be really visible in the space.

11 And second reason is during my career, a lot of
12 people have helped me and I'm a big fan of giving back.
13 So I spend a lot of time trying to produce video and
14 content to encourage high school and college students to
15 get into cybersecurity and pursue a career in cyber.

16 Q Let me show you the next slide in your presentation.
17 Does this summarize your education and qualifications,
18 Dr. Cole?

19 A Yes, it does.

20 Q What degrees do you hold?

21 A I hold a bachelor's and master's in computer science,
22 with a minor in business, from New York Institute of
23 Technology, and I have my doctorate from Pace University
24 in which my dissertation was on cybersecurity.

25 Q Now, what did you do on the Cybersecurity Commission

Eric Cole - Direct

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1 for the 44th president of the United States?

2 A There were two main responsibilities. One was to
3 work as a part of a team to build out a strategy for
4 making sure that the United States can be properly
5 protected from cyber attacks and from a very high level,
6 to make sure the president and executive office was aware
7 of some of the threats and exposures.

8 The second area was when there were specific
9 problems or issues, I was often brought in to brief the
10 president and provide advice.

11 Q What is a CISSP certification?

12 A That's, of course, an acronym. There will be plenty
13 of those today, but I'll do my best to spell them out. It
14 stands for Certified Information System Security
15 Professional. It's one of the primary and top
16 certifications in cybersecurity. I earned my CISSP in the
17 mid-'90s, and I continue to earn CPEs, continuing
18 professional education credits, and maintain my CISSP in
19 good standing today.

20 Q Have you published any books in the area of
21 cybersecurity?

22 A Yes, I have.

23 Q Let me show you your next slide. Does this show the
24 books that you've authored in cybersecurity?

25 A Yes, it does.

Eric Cole - Direct

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1 Q At a high level, what are the topics of these books,
2 Dr. Cole?

3 A So on the right-hand side, the main topics when I
4 first started writing in the late '90s, early 2000, were
5 really technical topics to help people understand and get
6 into the field of cybersecurity. Network Security Bible,
7 1st and 2nd edition, has become one of the core textbooks
8 at high schools and colleges.

9 Then in recent years, I started putting more
10 focus on helping to raise awareness with nontechnical
11 folks, parents, doctors, teachers. Lawyers are often
12 targeted by cyber attacks. So I wrote books like Online
13 Danger, and my most recent book, Cyber Crisis, was a Wall
14 Street Journal number 1 best seller.

15 Q During your work in cybersecurity over the past
16 30 years, have you participated in licensing negotiations
17 for cybersecurity patents?

18 A Yes, I have.

19 Q About how many?

20 A Over 15 times with Lockheed Martin, McAfee and with
21 some of our recent clients.

22 Q What was the nature of the work that you did to
23 support the patent licensing negotiations?

24 A So at both Lockheed Martin and McAfee, one of the
25 exercises you do in technology companies is when you have

Eric Cole - Direct

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1 a problem or a challenge, you do a buy or build exercise
2 where you'll essentially say is it more cost effective and
3 timely for us to build this technology in-house or does it
4 make sense for us to buy it.

5 In the buy capacity, I was responsible for
6 looking at what other technologies existed, what other
7 patents were out there, and then was directly involved in
8 negotiating licenses for those patents so we could augment
9 our offerings.

10 Q Now, you said buy or build. If a company buys, are
11 they developing that technology with their own sweat and
12 in-house R&D?

13 A No, they are not.

14 Q I see. Remind us, Dr. Cole, for how many years have
15 you worked in cybersecurity in one capacity or another?

16 A It's currently going on 31 years as a cybersecurity
17 professional.

18 MR. GUZIOR: Your Honor, Columbia offers
19 Dr. Cole as an expert in the cybersecurity industry.

20 THE COURT: Any objection?

21 MR. MORIN: No objection, Your Honor.

22 THE COURT: All right. You're deemed an expert
23 in cybersecurity.

24 BY MR. GUZIOR:

25 Q Thank you for that, Dr. Cole. Let's now get to work.

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1 A Okay.

2 Q And talk about the assignment that you had for this
3 trial. Let me show you the next slide. Does this
4 illustrate your assignment for this trial?

5 A Yes, it does.

6 Q What is shown on the left-hand side?

7 A On the left-hand side is one of the patents and one
8 of the claims of the patents, but what's important is
9 what's in bold. What's in bold is the combined model
10 invention, which is the core invention that's across all
11 four of the patent claims that are asserted in this case.

12 Q What is shown in the middle?

13 A In the middle is BASH.

14 Q And what is BASH, Dr. Cole?

15 A BASH is part of a technology called SONAR. So
16 SONAR/BASH, and BASH is the infringing technology in this
17 case that incorporates machine learning with combined
18 models to be able to catch advanced unknown threats.

19 Q What is shown on the right-hand side of this slide?

20 A On the right-hand side is a sample of some of
21 Norton's products that they sell.

22 Q What type of products does Norton sell?

23 A Norton sells endpoint security products, sometimes
24 referred to as antivirus. This is software that you
25 install on a computer system to protect that computer from

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1 various types of malware.

2 Q What does the first arrow "value" represent on this
3 slide?

4 A That first arrow represents the first step in my
5 apportionment assignment, which was to look at the patents
6 and determine the value that they contribute to BASH.

7 Q What is the second arrow representing?

8 A That would be the second step of my assignment, which
9 was then look at BASH and determine the value that it
10 provides to Norton's products.

11 Q Yesterday and last week the jury heard from
12 Dr. Bailey, who testified about infringement. Did you
13 perform a separate infringement analysis?

14 A No, I did not.

15 Q For your assignment, the value that Columbia's
16 patented invention contributes to the accused products,
17 does the law require you to make an assumption regarding
18 infringement?

19 A Yes, it does.

20 Q What assumption?

21 A The assumption, when you perform apportionment, is
22 that the patents infringe. So I went into this assignment
23 with the assumption that the patents in this case infringe
24 the products.

25 Q Dr. Cole, you said that the patents infringe. Did

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1 you mean to say that the products infringe?

2 A I apologize. Yes, sir. The products infringe the
3 patents. Thank you.

4 Q And that was a starting assumption of your valuation
5 analysis?

6 A That is correct.

7 Q Let me direct you to the next slide, which shows the
8 cover pages of the '115 and '322 patents. On what date
9 did Columbia file the provisional patent application for
10 these two patents?

11 A The provisional patent application was filed
12 October 2005.

13 Q When did these patents issue, Dr. Cole?

14 A The '115 issued December 2011 and the '322 issued
15 December 2013.

16 Q For your apportionment analysis, did the issue and
17 state of the patents have any particular significance?

18 A Yes, they did.

19 Q What was it?

20 A Those two dates would indicate the date of the
21 hypothetical negotiation that would occur in this case.

22 Q What do you mean by hypothetical negotiation?

23 A So in doing the apportionment to determine the
24 patent's value to the products, you have to go in and look
25 at the dates of 2011 and '13 and say if on those dates,

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1 the two parties sat down and in good faith negotiated a
2 proper licensing and they assume that the patents infringe
3 based on the information available during 2011 and 2013,
4 what would the two parties agree to.

5 Q Is the hypothetical negotiation something that you
6 came up with?

7 A No, I did not.

8 Q What is it?

9 A It's something that is common in patent law; when
10 you're going in and doing apportionment for damages and
11 patent cases you use this concept of a hypothetical
12 negotiation where you go back in time to the dates -- in
13 this case, 2011 and '13 -- you look at what information
14 was available, and based on that information, determine
15 the reasonable value the patents contribute to the
16 products.

17 Q Now, the provisional patent application was October
18 of 2005. Can you tell the jury approximately when the
19 Norton first released the infringing SONAR/BASH feature?

20 A The infringing SONAR/BASH feature was first released
21 in 2009 in the consumer product and was later released in
22 2011 in the enterprise product.

23 Q Apart from establishing the dates of the hypothetical
24 negotiation, did these dates help you establish a timeline
25 for your valuation analysis?

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1 A Yes, they did because the first important date, the
2 filing of the provisional, that helped me understand when
3 the inventors came up with this idea. So because the
4 provisional was filed in 2005, that means prior to 2005,
5 they came up with this invention. Then in 2011 and 2013
6 would be when the hypothetical negotiation occurs based on
7 all the changes that happened within the cybersecurity
8 space.

9 Q Now, I want to talk through the timeline, Dr. Cole.
10 I'm going to show you an excerpt from Exhibit PX-325 at
11 11. First, Dr. Cole, what is this exhibit?

12 A This is an internal Norton presentation talking about
13 the technology and the threats that came out in 2008.

14 Q What does this chart in Norton's document illustrate?

15 A This is showing the trend or what we like to call the
16 challenges that started happening in 2000. So if we look
17 at the left, in 2000 to 2004-2005, the amount of threats
18 were fairly linear. They were manageable, and a lot of
19 the traditional defenses that companies like Norton and
20 others built were effective at dealing with that threat.

21 But around 2005, 2006, things started changing.
22 We started seeing an exponential increase in the number of
23 threats. We also saw a huge shift from known threats to
24 unknown threats, and that started putting a huge burden on
25 endpoint security vendors.

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1 Q The title says, "The Onslaught of Unknown Threats
2 Continues to Strain Traditional Defenses." What does that
3 mean to you?

4 A So in the late '90s, early 2000 when we started
5 having viruses and malware, companies like Norton and
6 McAfee built methods for dealing with it that were called
7 traditional defenses. They basically focused on known
8 threats and catching known problems. And they worked very
9 well for 2001, '2 and '3, but as this threat landscape
10 changed, as we saw this exponential increase in 2006 and
11 we saw all these unknown threats, all of a sudden these
12 traditional defenses weren't working. They weren't
13 effective, and what was happening is customers were
14 getting infected with a large amount of malware.

15 Q This chart stops in 2008. Did the problem stop in
16 2008?

17 A No, it did not. I experienced it firsthand at
18 McAfee. It continued in an exponential fashion where the
19 threats just kept coming and coming and coming.

20 Q Let me show you an excerpt from Exhibit PX-316 at 8.
21 First, what is this document, Dr. Cole?

22 A This is another internal Symantec document from
23 September 2010.

24 Q What does the chart on this slide show?

25 A So this chart is a little more expansive and detailed

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1 than the previous chart. You'll notice the other chart
2 went from 2002 to 2008. This goes from 2000 to 2010. But
3 the important part are the numbers that are added. When
4 we're looking at early 2000, we're seeing 5 different
5 viruses a day. Your traditional defenses can handle that
6 very, very well. But as with we move to '7, '8 and '9
7 where we go to 1500 and greater than 15,000, all of a
8 sudden our traditional defenses are not working, and what
9 happened is you had companies like Norton that, in early
10 2000, was doing a great job of stopping and protecting
11 their clients and in 2007 and '8 because of this
12 onslaught, all of a sudden their products weren't working,
13 their customers were getting infected, and they were
14 starting to have challenges.

15 Q Let me show you an excerpt from Exhibit PX-466 at 11.

16 First, Dr. Cole, what is this document?

17 A This is another document from the STAR team. STAR is
18 another acronym that stands for Symantec Technology And
19 Response. And it's the team within Norton that's
20 responsible for developing the anti-malware detection
21 methods, and this is from 2013.

22 Q Is this slide describing some of the problem that you
23 just explained to the jury?

24 A Yes. This slide does a great job of summarizing the
25 challenge. So 2000 to 2004-'5, we had, on the left-hand

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1 side, what's called a mass distribution model. What that
2 meant is malware authors would write one piece of malware
3 and they would send it out to hundreds of thousands of
4 computers to try to infect them. So if you knew about
5 that one threat, you could detect and stop all those other
6 computers from getting infected because they use the same
7 piece of malware over and over again.

8 But 2006, '7, '8, what happened was not only did
9 we see an exponential increase from 5 to 15,000, but we
10 switched to what we call this micro distribution model
11 where now a malware authors would write a unique piece of
12 malware for every single infection. So now every time
13 they infected a computer, it was a brand-new piece of
14 malware, it was an unknown threat, and the traditional
15 defenses just did not do a good job dealing with that
16 micro distribution model.

17 Q A moment ago, Dr. Cole, we saw a 2008 Norton document
18 stating that the onslaught of unknown threats was
19 straining traditional defenses. In the 2005 to 2009
20 period, what were the most common traditional defenses
21 against malware?

22 A There were three main types of traditional defenses.
23 One is what we call IPS, which is Intrusion Prevention
24 System, or a firewall. The second one was signature
25 detection, and the third one was basic behavioral rules.

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1 Q Dr. Cole, does slide 10 provide the graphics that you
2 had created to represent the traditional defenses?

3 A Yes, it does.

4 Q Did you prepare animations to show the jury how these
5 traditional defenses operated?

6 A Yes, I did.

7 Q Let me show you the first animation, Dr. Cole. And
8 when I play this, can you explain to the jury what it's
9 showing?

10 A Absolutely.

11 So with antivirus signatures, the way it works
12 is on the bottom you have a database of known signatures.
13 So once you know about a threat, you create a signature
14 for it and you put it in your database. Then when a new
15 piece of malware comes out or a new file, what you do is
16 you take that file and you check it against your database.
17 You say does this match signature 1, does this match
18 signature 2. And in this case, it matches signature 4,
19 and therefore, we know that this is the virus and we're
20 able to block it on the system.

21 Q Now, let me continue this animation, and please
22 explain to the jury what it shows.

23 A So we still have our database in the bottom, but now
24 we have a new piece of malware, and as it goes through, it
25 doesn't match any of the signatures. And because it

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1 doesn't match any of the signatures, the way antivirus
2 works is if it doesn't match a signature, we assume it's
3 good and we allow it to run and operate on the system.

4 Q And is this the reason that antivirus signatures as a
5 traditional defense couldn't keep up with the explosion in
6 new malware?

7 A That's exactly the reason. Because antivirus is only
8 as good as the database. It's only as good as the known
9 threats. If you know about a threat, antivirus works
10 well. If you don't know about a threat, it doesn't.

11 So if you remember that first chart where you
12 had 5 new pieces of viruses a day in 2002, we could easily
13 keep up with those signatures. But in 2008 when you had
14 15,000, antivirus couldn't keep up with those threats and
15 therefore, led to a high amount of infections.

16 Q Now let's move to IPS firewall. First, what does IPS
17 mean?

18 A IPS stands for Intrusion Prevention System.

19 Q Now, I'm going to play your animation on slide 13,
20 and please explain to the jury what it shows?

21 A So in the bottom left is the Internet, and in the
22 upper right is a computer, and those boxes are packets or
23 information coming from the Internet into the computer.
24 And the firewall sits like a checkpoint where it looks at
25 each packet, it looks at the address, and it has a list of

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1 bad addresses. If the address of the packet matches a bad
2 address, it blocks it. If it doesn't match a bad address,
3 then it allows it through.

4 Q Now, Dr. Cole, how does the firewall know when an
5 address is bad?

6 A Because we've already detected a known site that is
7 bad and we give that list to the firewall. So the
8 firewall is provided a list of known bad addresses. So
9 it's able to catch addresses that we're aware of and we
10 know about.

11 Q Now, Dr. Cole, why did the -- in your animation, why
12 did the firewall miss the last IP address here that
13 ultimately infects the computer?

14 A Because it was an unknown address. It wasn't on the
15 list. We didn't know about it. This was a new site
16 that's now malicious, and it illustrates one of the
17 weaknesses of IPS firewall is that it cannot catch unknown
18 threats.

19 Q Let's talk about the last traditional defense, a
20 simple behavior rule. Are these graphics on slide 14
21 graphics that you prepared to show how a simple behavior
22 rule works?

23 A Yes, they are.

24 Q Can you explain to the jury what this shows?

25 A So in the top line, we have a piece of malware. We

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1 look at the behavioral pattern of that malware that we
2 know about, and we create a predefined behavioral rule.
3 So we've determined that behavior A, followed by behavior
4 B, followed by behavior C is bad. So attack 1 comes in.
5 It's a known threat, and its behavior matches the behavior
6 of the predefined rule. A, followed by B, followed by C.
7 So we flag it as an attack.

8 The problem with simple behavior rules is
9 attack 2, which is an unknown threat. This is a brand-new
10 threat that has behavior A, followed by B, followed by Q.
11 Because that behavioral string doesn't match our
12 predefined string, it's not known by the software and
13 therefore, it's allowed to execute and infects the system.
14 Q Now, were all of these traditional defenses strained
15 by the onslaught of unknown malware because they depended
16 on having seen and knowing the malware?

17 A Yes, that is the exact reason. All these traditional
18 defenses are based on the premise of the macro
19 distribution model, that we know about a piece of malware
20 before it infects a large number of people and therefore,
21 we can catch it.

22 When that model changed to the micro
23 distribution where now we see all these unknown threats,
24 all of a sudden these traditional defenses do not work
25 well because they do not catch unknown threats that we

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1 have not seen before.

2 Q Dr. Cole, were these shortcomings in traditional
3 defenses having an impact on Norton's business?

4 A Yes, they were.

5 Q Let me show you an excerpt from Exhibit PX-315 at 12.
6 First, what is this document?

7 A This is an internal Norton document from 2009 talking
8 about the problems and challenges with the new types of
9 malware.

10 Q Now, on this slide, if we look at the second sub
11 bullet under, "We're letting Malware through," it says,
12 "Only 85 percent efficacy (Symantec Internal Testing)
13 15 percent is getting through," with two exclamation
14 points. At the time of this, October 2009, were you a
15 chief technology officer at Norton's main competitor,
16 McAfee?

17 A Yes, I was. I was chief technology officer of the
18 Americas at McAfee.

19 Q Now, in the computer security business, could a
20 company with an 85 percent efficacy have stayed in
21 business for long?

22 A In my professional experience, no, they couldn't.

23 When I was at McAfee and you're in antivirus
24 companies, you are obsessed with efficacy. Efficacy is
25 the accuracy. That's how accurate the software is.

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1 Now, I know 85 percent, if you're in school
2 taking a hard class like physics, might seem like a good
3 grade, but in cybersecurity, you want to be as close to
4 100 percent as possible and 85 percent efficacy is a
5 terrible number because it means a large number of your
6 customers are getting infected with malware.

7 Q Now, I want to show you a page from this same
8 document, PX-315 at 7. This slide states, "Our promise is
9 to give customers confidence." And this slide shows
10 Symantec's logo. Do you see that?

11 A Yes, I do.

12 Q In PX-315 at 8, we see Symantec's logo again. Does
13 this slide relate to the slide that we just looked at?

14 A Yeah. So you have the first slide in the
15 presentation talking about Norton's job is to give
16 customers confidence, and then the next slide in the
17 presentation says, "But too many customers have lost that
18 confidence." And Norton, in their own presentation, put
19 an X through confidence in their logo.

20 Q Does this document confirm your view that
21 shortcomings in traditional detection methods were
22 impacting Norton's business?

23 A Yes, it did because it shows that customers are
24 losing confidence. And this time period, October 2009,
25 when I was at McAfee, and I was seeing this firsthand,

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1 where we were getting a lot of Norton customers that were
2 calling us up and wanted to switch to McAfee because they
3 were getting frustrated with the infection rate and they
4 were getting frustrated with the confidence they had in
5 the product.

6 Q Let me show you an excerpt from Exhibit 325, a
7 document that we looked at earlier, and this is at page 4.
8 Can you explain to the jury what this chart shows?

9 A Yeah. So this chart is showing unit sales worldwide,
10 and if you look at the chart, the worldwide unit sales are
11 trending down over time for their core products.

12 Q Let me show you another excerpt from PX-325 at
13 page 5. What does this chart show about competition
14 between your former company, McAfee, and at the time,
15 Symantec?

16 A It's showing that during this time period, McAfee's
17 consumer segment grew 20 percent while Symantec grew only
18 2 percent.

19 Q Now, around the time of this document in late 2008,
20 were malware detection companies also encountering
21 problems because of something called freeware?

22 A Yes. That was another issue. So a malware detection
23 company is struggling with this onslaught of new unknown
24 threats, and at the same time, we're getting this
25 competitive pressure coming in from freeware products.

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1 Q I want to show you another page of PX-325 at 14.

2 What does this page of PX-325 show, Dr. Cole?

3 A It's showing the proliferation of freeware. Now, at
4 the risk of stating the obvious, freeware is software
5 that's free. So it's software that's freely available
6 that you don't have to pay for. And what this is showing
7 is that at the end of 2008, 4 of the 5 top products for
8 detecting malware were freeware.

9 Q And at the time, did freeware typically provide the
10 traditional defenses that we discussed earlier?

11 A Yes, they did. What normally happens in software and
12 in cybersecurity is as you have mechanisms for detecting
13 malware becomes what we call commoditized, or common, they
14 often get put in freeware products. So we started seeing
15 freeware products that did signature, intrusion prevention
16 firewall, and basic behavioral rules to catch that basic
17 level of known threats.

18 Q Did freeware put pressure on companies like McAfee
19 and Symantec to acquire and sell new technologies?

20 A Yes, it did put considerable pressure on it because
21 imagine if you now have a product that's free and you're
22 charging for product but it has similar functionality, why
23 would somebody pay for your product if they can get the
24 same feature set for free? So it put a lot of pressure
25 that we had to go in and put additional value and benefit

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1 or new technology to justify the cost of commercial
2 products versus free products.

3 Q Let me direct your attention to some deposition
4 testimony from Dermot Wall, who will appear by video later
5 today. First, Dr. Cole, who is Mr. Wall?

6 A He's a senior director of product management and was
7 also one of the corporate designees to be able to speak on
8 this topic.

9 Q Mr. Wall's testimony, does it confirm your view that
10 freeware placed pressure on Symantec?

11 A Yes, it does. In the first Q and A when he's asked
12 if it put competitive pressure, he said correct.

13 But then Mr. Wall really summarizes it very
14 well, when he says we need to provide better protection
15 than a free product. If Norton's products are doing
16 similar or the same as a free product, why would anyone
17 buy Norton?

18 Q Let me show you more of Mr. Wall's deposition
19 testimony on slide 22. Does this testimony also confirm
20 your view, Dr. Cole?

21 A Yes, it did.

22 Q How so?

23 A It's basically asking, saying if the freeware covers
24 the traditional defenses, do you need to go in and add
25 additional value, and Mr. Wall comes back and says, yes,

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1 if you can get it for free, why would you pay for it?

2 Q Now, before we get to the infringing SONAR/BASH
3 feature in 2009, I want to talk about TruScan. What is
4 TruScan?

5 A In 2005, Norton was recognizing that they were
6 starting to have challenges in this space, so they decided
7 to acquire a technology called TruScan and put it into
8 their product around 2005.

9 Q Was TruScan an early attempt at detecting new malware
10 based on behavior?

11 A Yes, it was.

12 Q Now, did Norton create that TruScan technology with
13 its own sweat and in-house R&D?

14 A No, they did not. They acquired the technology from
15 a company called WholeSecurity.

16 Q Was TruScan the answer to Norton's problem?

17 A No, it was not. In 2005 and '6, it worked okay, but
18 as the proliferation of threats and unknown challenges
19 came in in '7, '8, and '9, TruScan did not adapt very well
20 and was not able to keep up with those evolving threats.

21 Q Let me show you an excerpt from Exhibit PX-490 at
22 page 1. First, Dr. Cole, what is PX-490?

23 A That is an internal e-mail exchange from Gerry Egan,
24 who was a senior director of STAR at Norton.

25 Q Mr. Egan says, "First, a bit of background. TruScan

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1 is now quite long in the tooth. It was based on a
2 technology from WholeSecurity, a company that Symantec
3 purchased back in 2005. At the time, the technology was
4 leading edge but since then, the threat landscape has
5 shifted considerably." First, Dr. Cole, what do you
6 understand Mr. Egan to mean when he says, "Now quite long
7 in the tooth"?

8 A What that means in my professional opinion is that
9 it's no longer working. It's no longer effective. It's
10 no longer doing the job of catching the unknown threats.

11 Q I'm not sure you need a Ph.D. in cybersecurity to
12 pick up on that, Dr. Cole.

13 And, Dr. Cole, when Mr. Egan references that the
14 threat landscape has shifted considerably, do you
15 understand that to be a reference to the explosion in new
16 malware that we discussed earlier?

17 A Yes, I do.

18 Q I want to continue on this topic and show you an
19 excerpt from Exhibit PX-501 at 1. First, what is this
20 exhibit, sir?

21 A This is an e-mail exchange from one of the engineers
22 that worked on the infringing version of SONAR/BASH called
23 Shane Pereira.

24 Q Can you read the excerpt from Mr. Pereira's e-mail
25 here?

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1 A "A less stronger argument is that TruScan as
2 currently implemented in SEP" -- that's an acronym that
3 calls for Symantec Endpoint Protection, or the enterprise
4 version -- "is lacking (to put it kindly). I am sure more
5 customers have realized that it detects almost nothing.
6 You probably would want to jettison such a brand name."

7 Q And did this e-mail inform your opinion about the
8 efficacy of TruScan?

9 A Yes, it did. It is basically showing that inside of
10 Norton, they are recognizing that it is no longer working,
11 it is no longer effective, and that they need a new
12 solution.

13 Q I want to continue on this same exhibit, PX-501, and
14 this is another e-mail from Gerry Egan, and he says, "As a
15 company, we should be distancing yourselves as far as
16 possible from TruScan. TruScan just doesn't" -- appears
17 to be a typo -- "isn't affect I anymore." In the last
18 sentence, Mr. Egan states, "It's time to set the sights on
19 our new technology and create a splash when it launches
20 with a total new branded feature." What technology do you
21 understand Mr. Egan to be referencing here?

22 A He's referencing the infringing version of
23 SONAR/BASH.

24 Q I see. And continuing on this subject matter, I want
25 to go back to PX-490 at 1. And Mr. Egan says, "Of course,

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1 our protection has evolved and with it, a new generation
2 of behavioral protection has been released in the form of
3 BASH." What do you understand that to be a reference to,
4 Dr. Cole?

5 A He is referring to the infringing version of
6 SONAR/BASH.

7 Q And was the infringing SONAR/BASH a lot better than
8 TruScan in terms of detecting unknown threats?

9 A Yes, it was.

10 Q Let's now turn to the infringing SONAR/BASH feature.
11 And first, Dr. Cole, remind us, when was the infringing
12 SONAR/BASH feature released by Norton?

13 A It was released in the consumer products in 2009.

14 Q And when was it released in SEP, or Symantec Endpoint
15 Protection, for enterprise customers?

16 A That was 2011.

17 Q And remind us where that sits in the timeline in
18 terms of when the provisional patent application for the
19 '115 and '322 was filed?

20 A So in 2005, the professors at Columbia came up with
21 this new idea as we started seeing these emerging, new,
22 unknown threats. Then 2008 and '9, we had all these
23 emerging threats, unknown threats occurring in Norton's
24 products weren't doing very well. Then we come out with
25 the infringing version of SONAR/BASH in 2009, and as we'll

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1 see, all of a sudden things start changing dramatically
2 for Norton in terms of their ability to catch the malware.

3 Q How did Norton portray the infringing SONAR/BASH to
4 the public at the time it was introduced in 2009?

5 A They portrayed it in a very positive light, as a game
6 changer, as one that allowed them to actually catch these
7 real-world threats.

8 Q I want to show you another exhibit, PX-170 at 1.
9 First, Dr. Cole, what is PX-170?

10 A This is a blog post that's publicly available on
11 Norton's website.

12 Q Based on your review of the documents, did Norton use
13 its blog to provide information to customers?

14 A Yes. They used it to share information with current
15 customers, prospective customers, and new customers.

16 Q Now, Norton says, "SONAR is a behavioral security
17 engine that is at the heart of our anti-malware defenses."
18 In your view, Dr. Cole, why did Norton refer to the
19 infringing SONAR/BASH as the heart of its anti-malware
20 defense?

21 A Because it really played a critical role of being
22 able to detect and deal with these unknown threats, and
23 not only can the infringing version of the SONAR/BASH be
24 able to detect all these unknown threats, but as we'll see
25 throughout my presentation, it also helped all of the

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1 other detection components within the product. So that's
2 why it's considered that heart or critical component.

3 Q Now, sales and marketing is one thing, Dr. Cole, but
4 sometimes companies overhype a new feature. Is that what
5 happened here?

6 THE COURT: I'm going to interrupt you. What is
7 the date of this blog?

8 BY MR. GUZIOR:

9 Q Dr. Cole, would you provide the date, please?

10 THE WITNESS: Sure. It's July 9th, 2009.

11 THE COURT: Okay. Sorry to interrupt.

12 MR. GUZIOR: Apologies, Your Honor.

13 BY MR. GUZIOR:

14 Q So, Dr. Cole, sometimes a company will overhype a new
15 feature and the feature actually isn't all that great.

16 Was that the case here?

17 A No, it was not.

18 Q Why not?

19 A Because if we looked at other internal documents and
20 communication within Norton, they provided real numbers to
21 show that it was actually working, it was detecting. And
22 if you remember, before the infringing version of
23 SONAR/BASH, we were at 85 percent efficacy, and you'll now
24 see with the infringing version of SONAR/BASH, we're close
25 to 100 percent efficacy.

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1 Q Now, Dr. Cole, I want to show you an excerpt from
2 Exhibit PX-349 at page 28. First, what is this exhibit,
3 and what is the date of this exhibit?

4 A This is an internal presentation talking about the
5 infringing version of SONAR/BASH, and it's from
6 November 2009.

7 Q And remind us, where does November 2009 sit relative
8 to the first hypothetical negotiation that would have
9 occurred in this case?

10 A This is right before the first hypothetical
11 negotiation that could have occurred December 2009.

12 Q Do you mean 2011, Dr. Cole?

13 A Sorry. I'm confusing. Sorry. 2009 is when the
14 version of -- the infringing version of SONAR/BASH came
15 out within the product. And then 2011 and '13 were the
16 two hypothetical negotiations. I apologize. The dates
17 got confused. So this is a couple of years before the
18 first hypothetical negotiation of 2011.

19 Q Thank you, Dr. Cole. No worries. I know it's a lot
20 to keep in mind.

21 There's a reference on this slide to BASH 6 and
22 SONAR 2. What do you understand those to be?

23 A As you roll out software, you have different version
24 numbers. So you'll have BASH version 2, BASH version 3.
25 BASH version 6 and SONAR 2 are the first releases that

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1 have the infringing version of SONAR/BASH.

2 Q This slide refers to approximately 200K, or 200,000
3 convictions. What is a conviction?

4 A A conviction is when you look at a file, you
5 determine that it contains malware, and you block it or
6 stop it from running on your system.

7 Q Did this document inform your opinion that the
8 infringing SONAR/BASH feature was technically successful?

9 A Yes, it did. This document is talking about a
10 four-week period. And these are great numbers, 200,000
11 convictions, million install count, 39 million submissions
12 received from 3.4 installs.

13 These are real numbers showing that the
14 infringing version of SONAR/BASH is working.

15 Q And is this a document for customers or an internal
16 Symantec document?

17 A This is an internal Symantec document.

18 Q I next want to show you PX-530 at 12. What is this
19 document exhibit, and what is the date of it, Dr. Cole?

20 A This is a presentation that vice president of STAR,
21 Philip(sic) Gardner is going in and given within Symantec,
22 and this is from May 2010.

23 Q And I think -- what was Mr. Gardner's role at the
24 company, Dr. Cole?

25 A He was vice president of STAR.

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1 Q And how did STAR relate to the SONAR/BASH feature, if
2 at all?

3 A STAR stood for Symantec Technology and Response.
4 STAR is the division in Norton that was responsible for
5 all of the different components that were within the
6 antivirus product, including the infringing version of
7 SONAR/BASH.

8 Q Now, I want to look at the numbers on the slide. Can
9 you explain the numbers that are provided in the first two
10 bullets?

11 A Sure. So SONAR 2 is the infringing version of
12 SONAR/BASH, and it has detected and blocked more than
13 2.8 million threats since shipping in September and has
14 blocked a threat on 1 out of every 5 machines on which
15 it's installed.

16 Q And what is the reference to September -- I think of
17 2009?

18 A September 2009 is when the infringing version of
19 SONAR/BASH was released in the consumer product.

20 Q If you look at the third bullet, it says, "True zero,
21 or 0 day protection." What does that mean, Dr. Cole?

22 A Zero day, or 0 day, threats are threats that we've
23 never seen before. These are brand-new threats that are
24 coming on the scene for the first time or are unknown
25 threats.

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1 So this is showing that the infringing version
2 of SONAR/BASH, when we had real-world zero-day threats,
3 real attacks we've never seen before, it was able to
4 detect and block those unknown threats.

5 Q I want to stick with this exhibit, PX-530, and show
6 you page 15. Did this slide tell you anything about the
7 value of the infringing SONAR/BASH feature?

8 A Yes, it did.

9 Q Why?

10 A So the vice president of STAR, talking to the sales
11 and marketing team, and he is saying, "Get the word out
12 about SONAR 2. It's a huge competitive advantage Norton
13 products have over competitors."

14 So they clearly recognize that now with the
15 infringing version of SONAR/BASH, they now are catching
16 unknown threats and are doing much better than their
17 competitors are in this space.

18 Q I want to stick with 530 yet again, but show you
19 slide 13 in PX-530. Did third party publications take
20 note of the infringing SONAR/BASH feature?

21 A Yes, they did.

22 Q How so?

23 A So PC magazine, back in 2010, was a very popular
24 magazine for consumers, and it periodically ranks or tests
25 different products, and it came out and said, "SONAR 2

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1 turns up the heat. In testing, this really seemed to
2 work, and it turned in record-breaking scores." So even
3 third parties that are doing testing are recognizing that
4 SONAR 2, the infringing version, is working and very, very
5 effective.

6 Q Dr. Cole, were you working at Norton's competitor,
7 McAfee, around the time of this document?

8 A Yes, I was.

9 Q And would a product review like the one here in PC
10 magazine provide value to a company like Symantec?

11 A Yes, it would. When I was at McAfee, if we get
12 testing results or articles like this, we would make
13 copies. We would send it out to all of our customers. It
14 would be something that we would promote and be very proud
15 of.

16 Q Now, I want to show you -- sticking with Mr. Patrick
17 Gardner, I want to show you PX-502 at 2. First, Dr. Cole,
18 what is this document, and what was its date?

19 A So this was an internal e-mail from Mr. Gardner, the
20 vice president of STAR, that he was sending and talking
21 about customer meetings, and this was from September 2010.

22 Q Mr. Gardner says, "We are pretty proud of it. It has
23 caught a lot of stuff we would have otherwise missed (over
24 15 million attacks just since 1 year ago launching it) and
25 that is only from consumer products." What do you

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1 understand the reference to "only from consumer products"
2 to mean?

3 A At the time, 2010, the infringing version of
4 SONAR/BASH, which is what he's referring to here, was only
5 in the consumer products. So these results of 15 million
6 attacks that would have otherwise been missed is only for
7 consumer. It's not including any of the enterprise
8 products.

9 Q Now, in the next sentence, Mr. Gardner says, "On top
10 of all that, it also caught all the big press threats
11 since launch without us changing a things. Real 0 day
12 proactive protection for Aurora, Stuxnet and last week's
13 ImSolK." Do you see that?

14 A Yes, I do.

15 Q In the cybersecurity industry, is it notable that the
16 infringing SONAR/BASH detected those threats?

17 A Yes, it was. And it was something that we noticed at
18 McAfee.

19 When I see the word Aurora, I still start
20 shaking a little bit because that was a zero-day threat
21 that came out January 2010. And I was at McAfee and was
22 up for seven days straight going between the White House,
23 the Pentagon, and customers because our product did not do
24 a good job at detecting it and we had to do a lot of
25 damage control. And I remember just sitting back with my

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1 team, saying, "What is Norton/Symantec doing," because
2 they were able to catch it when almost all the other
3 vendors were struggling when these attacks came out.

4 Q Now, Dr. Cole, I think you mentioned that Norton
5 introduced the infringing SONAR/BASH in consumer products
6 first. Did Norton eventually introduce the infringing
7 feature into the enterprise product?

8 A Yes, they did. About -- a little less than two years
9 later in 2011.

10 Q Let me show you an excerpt from PX-362 at 1. What is
11 this document, Dr. Cole, and what is its date?

12 A So this is a document for SEP, which is Symantec
13 Endpoint Protection, which is their enterprise product.
14 12.1 is the infringing version that contains SONAR/BASH,
15 and this was from September 2011.

16 Q Do you assign any significance to the fact that
17 Norton introduced the infringing technology into its
18 enterprise product?

19 MR. MORIN: Objection, Your Honor. I've let it
20 go on for a little while, but he keeps calling it -- even
21 the lawyer's questioning -- the infringing product again
22 and again. The jury will make that decision. I'd prefer
23 they call it the accused product, if we don't mind.

24 THE COURT: I think that's fair.

25 MR. GUZIOR: Your Honor, legally, his analysis

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1 requires an assumption of infringement.

2 THE COURT: I take that back. It's overruled.

3 It's a presumption of infringement. That's what he's --

4 for the hypothetical negotiation.

5 MR. MORIN: An assumption of infringement that

6 he's made, but I think we could call it the --

7 THE COURT: No. The law requires an assumption

8 of infringement for the hypothetical negotiation.

9 MR. MORIN: Understood, Your Honor.

10 THE COURT: My apologies.

11 MR. GUZIOR: No apologies, Your Honor. Thank

12 you.

13 BY MR. GUZIOR:

14 Q Dr. Cole, just to step back, we're in 2011 with the
15 SONAR/BASH feature introduced into the enterprise product.

16 And my question for you is do you assign any significance
17 to the fact that Norton chose to introduce the infringing
18 technology into its enterprise product eventually?

19 A Yes, it's significant because when you're rolling out
20 new features at a software vendor, you always want to roll
21 it out for the consumer base first because if the product
22 doesn't work or there's issues or challenges, it has less
23 of an impact than if you roll it out to your enterprise
24 customers and you take down an entire company.

25 So it's very common that you test out a new

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1 feature in consumer products first, and in my experience,
2 normally you wait three to five years to verify and
3 validate it before you put it in the enterprise version.

4 So in this case, when Norton decided to roll it
5 out in their enterprise in less than two years, it is
6 significant not only in the confidence they had in the
7 infringing version of SONAR/BASH, but how well it was
8 working and how effective it was.

9 THE COURT: Now I'm going to amend my ruling. I
10 think you should say accused products. He is presuming
11 infringing, and I think it's different in a question of a
12 lawyer.

13 MR. GUZIOR: I'll obey that rule perfectly,
14 Your Honor. Thank you.

15 THE COURT: Okay. And thank you for the
16 clarification. All right.

17 BY MR. GUZIOR:

18 Q Now, Dr. Cole, did the SONAR/BASH feature continue to
19 succeed in 2012?

20 A Yes, it did.

21 Q Let me show you an excerpt from Exhibit PX-506 at
22 page 28. First, Dr. Cole, what is PX-506, and what was
23 its date?

24 A This was an internal presentation on the different
25 types of engines, including infringing version of

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1 SONAR/BASH, from April 2012.

2 Q Is the date of this document in between the date of
3 the first hypothetical negotiation and the second
4 hypothetical negotiation?

5 A Yes. It's right in between the first hypothetical
6 negotiation was December 2011, and the second was December
7 2013.

8 Q Can you explain the numbers that are shown on this
9 slide?

10 A Yes. This is showing a day in the life of SONAR. So
11 for a 24-hour period, March 19th, 2012, the infringing
12 version of SONAR/BASH detected 106,829 files on 55,841
13 unique machines.

14 Q And I want to stay with this topic but show you
15 Exhibit PX-486 at page 38. What is this document, and
16 what was its date?

17 A This is another internal document on the infringing
18 version of SONAR/BASH from October 2012.

19 Q Can you explain the different percentages the jury
20 sees on this slide?

21 A Yeah. So Norton took all of the malware that the
22 infringing version of SONAR/BASH detected in which Norton
23 got 100 percent, Norton got 100 percent efficacy, and then
24 they compared it to their competitors. Their closest
25 competitor only detected 24 percent, Kaspersky. Microsoft

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1 only detected 16 percent, and all of their other
2 competitors were single digits in terms of what they
3 caught.

4 So to compare this with prior to 2009 where we
5 were losing market share to McAfee and had low efficacy,
6 with the finishing version of SONAR/BASH, things changed
7 and now they had a huge competitive advantage.

8 Q I now want to talk a little bit about why the
9 SONAR/BASH feature was successful. Are there any
10 characteristics of SONAR/BASH that made it unique?

11 A Yes. First is if we look at where it sits in the
12 product and how it works and operates, it's the last line
13 of defense. So it's going to run after every one of the
14 other components have a chance. So it's going to catch
15 things that the other engines weren't able to catch.

16 And if we're looking at what it's catching, the
17 second reason, it's catching the 1 percent of malware
18 that's most critical. These are the advanced zero-day
19 unknown threats that would have a huge impact on
20 customers. And then the third reason is SONAR/BASH makes
21 undetected threats known. It makes the unknown known. So
22 once SONAR/BASH detects an unknown threat, Norton uses
23 that information to then make the other detection
24 components better and smarter. So infringing version of
25 SONAR/BASH is contributing to the other product engines.

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1 Q Can we take those one at a time?

2 A Yes.

3 Q I want to unpack it a little bit. And let's start
4 with the last line of defense. Did you prepare an
5 animation to illustrate the concept of a last line of
6 defense in an antivirus product?

7 A Yes, I did.

8 Q Let me show that to you. I'm going to play the
9 animation, and can you explain to the jury what it shows,
10 Dr. Cole?

11 A Yeah. So in Norton's products, there's four main
12 components that go in and look for malware. The first one
13 is network. The second one is antivirus. The third one
14 is insider reputation, and the last one is behavioral
15 SONAR.

16 So what happens here is you have a fire that
17 comes in, and network says it looks good. Antivirus says
18 this looks good. Reputation says it looks good. So all
19 three of the previous layers missed it, and then
20 behavioral SONAR, with its machine learning and combined
21 models, is able to catch it and block an attack.

22 Q So I thought we were discussing why you viewed SONAR
23 as valuable. If SONAR is last, doesn't that mean it's the
24 worst?

25 A No, it doesn't. What you often do is take your

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1 components that have some complexity -- behavior SONAR,
2 with all the machine learning and all the combined models,
3 have some complexity. So you would typically put your
4 most important component last, and then give the other
5 engines, like network and antivirus that catches the known
6 threats, that catch the easy stuff, let those go first,
7 get rid of the simple, easy things. So now the only
8 things that's left for your most critical defense are the
9 hard critical attacks.

10 Q Have you seen evidence that Norton also considered
11 SONAR to be uniquely valuable as a last line of defense?

12 A Yes, I did.

13 Q Let me show you Exhibit PX-350 at 2. First,
14 Dr. Cole, what is this document, and what was its date?

15 A So this is an internal presentation within Norton on
16 BASH 6, which is the infringing version of SONAR/BASH, and
17 it's from 2009.

18 Q Who is Sourabh Satish?

19 A She is one of the engineers that works on SONAR/BASH
20 in Norton.

21 Q And does this document speak to the issue that you
22 just explained with your animation?

23 A Yes, it does. On the third bullet, we've highlighted
24 it. It says, "Last (and very important) line of defense."

25 Q What do you understand the first sub bullet to mean?

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1 A It's referring to the very advanced threats that we
2 started seeing during that time period.

3 So when it says, "exotic threats," it's talking
4 about threats that are using morphing techniques, like
5 encryption, or polymorphism or obfuscation, to try to go
6 in and hide and disguise what's going on. And these
7 advanced techniques were able to get around most of the
8 other products, but it wasn't able to get around the
9 infringing version of SONAR/BASH. It was able to catch
10 these exotic, zero-day threats.

11 Q Now, we've talked about SONAR qualitatively. I now
12 want to talk about quantity, and I think what you said was
13 the 1 percent that SONAR catches. How does SONAR's role
14 as the last line of defense impact the number of malicious
15 programs that it detects?

16 THE COURT: So, Mr. Guzior, I want to be sure
17 that we get all of this in, and normally we take breaks at
18 an hour and a half, but I think we should take a break
19 now. It's been a full hour and you're switching from
20 qualitative to quantitative. And so we'll let the jury
21 take a little rest and then we'll come back. So this will
22 be another 20-minute break. Okay?

23 MR. GUZIOR: Thank you very much, Your Honor.

24 THE COURT: Yes.

25 (The jury exited the courtroom.)

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1 THE COURT: All right. Sir, I'm going to remind
2 you, as I must, that you remain under oath during the
3 break and not to talk to anybody about your testimony.

4 And we'll take a 20-minute recess. So that puts
5 us really at noon, I think.

6 MR. MORIN: Your Honor, one point of
7 clarification, we've agreed with our friends, subject to
8 Your Honor's permission, that during direct, that he could
9 talk, if he'd like to, to his attorneys. I just figured I
10 would put that on the record.

11 THE COURT: No, you're right. And I thought of
12 it just as I said it. So I'm very glad it's on the
13 record. You may speak to your own attorneys, and we'll
14 come back right at noon. Okay?

15 MR. GUZIOR: Thank you, Your Honor.

16 (Recess taken at 11:36 a.m.)

17 (The trial resumes on the next page.)
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19
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25

1 THE COURT: All right. We can begin again.

2 Dr. Cole, I'm going to say in front of the
3 jury that you remain under oath, because I have to say
4 it in front of them.

5 I want to confirm, I think I misstated what
6 he was offered as an expert in. He's offered as an
7 expert in --

8 MR. GUZIOR: Cybersecurity industry, Your
9 Honor.

10 THE COURT: Cybersecurity industry. Because
11 I think in your *Daubert*, you said cyber and technical
12 computer security.

13 MR. GUZIOR: I think we shortened it to
14 cybersecurity industry.

15 THE COURT: Okay. So I'll make a finding
16 that you are qualified in the cybersecurity industry.
17 I think all I said was computer or something.

18 MR. GUZIOR: We probably caused the
19 confusion.

20 THE COURT: No, no, you said it right.

21 MR. GUZIOR: May I approach?

22 THE COURT: Please do.

23 The other thing I'm going to say is I want to
24 keep it at about one for the break. I know it's only
25 an hour. You can go over a little bit, but the jurors

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1 have to eat. Then we'll have a full one-hour break.
2 So just let me know when you're coming close. It may
3 not be perfectly timed, but I think with the expert
4 testimony, it's good to take more frequent breaks, but
5 they still, they need that hour, I think.

6 MR. GUZIOR: I'm going to try to finish in an
7 hour.

8 THE COURT: Oh.

9 MR. GUZIOR: So, Your Honor, let me see how
10 that goes in keeping that promise, but I was hoping to
11 finish in an hour, and then if Your Honor wanted to
12 take the lunch break.

13 THE COURT: Oh, okay. That would work out
14 pretty well.

15 We can bring the jury in.

16 (The jury entered the courtroom.)

17 THE COURT: All right. Welcome back. I
18 think we're going to be doing smaller chunks with
19 expert testimony. I hope that works for you.

20 So, Dr. Cole, you're still under oath, and we
21 will continue with direct examination.

22 BY MR. GUZIOR:

23 Q Dr. Cole, before the break we were talking about
24 the characteristics of SONAR/BASH that you had
25 identified as being unique. And we had talked about

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1 the last line of defense, and I now want to move on to
2 the second characteristic that you identified that
3 SONAR/BASH catches the most important 1 percent of
4 malicious programs. Is that okay?

5 A Yes, it is.

6 Q So far this morning, we've been talking about
7 SONAR/BASH mostly from a qualitative perspective, and
8 I want to spend a moment talking about quantity.

9 How does SONAR/BASH's role as the last line of
10 defense impact the number of malicious programs that
11 it detects?

12 A Because it goes last, it's going to catch a
13 smaller number than the layers that go before it, but
14 this is where we get into the quantity versus quality
15 where it might be a lower number, but the importance
16 of that 1 percent is very, very critical because it's
17 the difference between blocking an attack or a
18 guaranteed infection.

19 Q During your work on this case, have you seen data
20 that Norton provided showing the number of blocks by
21 the malware detection feature?

22 A Yes, I have.

23 Q Let me show you Slide 39, Dr. Cole. Is this a
24 summary of the malware detection data that you
25 reviewed in PX511 and PX523?

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1 A Yes, it is.

2 Q Can you explain these numbers to the jury, please?

3 A Yes. Just so we're aligned, network is referring
4 to intrusion prevention system or firewall. That's
5 the IPS layer. AVE is antivirus engine. Insight is
6 reputation, and then BASH is the SONAR/BASH we've been
7 talking about.

8 So network and antivirus engine, they're really
9 good at catching known threats. And there is a lot of
10 what we call in cybersecurity noise on the wire, which
11 is basic simple attacks. And that's what network and
12 AV are really good at catching, and that's why those
13 numbers are higher at the 41 and 52 percent because
14 they're catching a lot of that noise. And then when
15 it comes down to BASH, it's catching that 1 percent of
16 critical attacks that all the other layers are
17 missing.

18 THE COURT: Can I just confirm, are you
19 saying "noise on the wire"?

20 THE WITNESS: Yes, I am.

21 THE COURT: Okay. Thank you.

22 BY MR. GUZIOR:

23 Q Dr. Cole, earlier today we talked about freeware.
24 Do you remember that?

25 A Yes, I do.

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1 Q And is freeware also going to catch a lot of these
2 noise-on-the-wire, easy-to-detect malicious programs?

3 A Yes, they are. Essentially, freeware would cover
4 the first two categories. So network and antivirus
5 engine is essentially what your freeware is going to
6 focus on.

7 Q Doesn't this show that antivirus and firewall are
8 the most important features?

9 A No, they don't, because this is where we get into
10 the quantity versus quality. Network and antivirus,
11 their numbers are higher, but they're catching simple,
12 easy attacks that every product, including freeware,
13 would catch. It's that 1 percent that SONAR catches
14 that other products would miss that differentiates it
15 from the other layers.

16 Q If the data here focused only on the difficult
17 unknown attacks, would the percentage of detections
18 for Insight and BASH be higher?

19 A Yes, they would be much, much higher.

20 Q Why?

21 A Because if we go in and remove the basic simple
22 attacks that most of the products catch and freeware
23 catches, you're essentially removing almost all of
24 what network and AV is catching. So if we take that
25 out, and we're only focusing on the zero-day unknown

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1 threats, then around 90 percent of those threats are
2 going to be caught by Insight and SONAR/BASH.

3 Q When looking at block count percentages, like the
4 one on the screen, using all malware, easy to detect,
5 and difficult to detect, is there a rule of thumb that
6 you would recommend about the size of the percentage
7 and the value of the technology?

8 A What would happen is because the lower the number,
9 the more valuable that layer is, because it's catching
10 things that other layers miss, so I would actually say
11 even though BASH is one of the lowest numbers, that
12 means it's one of the most valuable pieces because
13 it's able to detect the malware that the other layers
14 are not able to catch.

15 Q Based on your review of the evidence, did Norton
16 share that view?

17 A Yes, they did.

18 Q Let me show you an excerpt from Exhibit PX511 at
19 2. First, what is PX511 and what does it state?

20 A This is an email exchange with Adam Bromwich who
21 is a vice president of STAR. And it's from
22 March 2014.

23 Q How does this email from Mr. Bromwich relate to
24 the block count data that we just reviewed?

25 A So what he's saying is there's another important

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1 stat we need to look at, which is what we've been
2 discussing. He says, If you're looking at the real
3 world, newly-crafted polymorphic threats, the advanced
4 threats, 90 percent of our detection capability is due
5 to Insight and SONAR.

6 Q Now, remind us, Dr. Cole. If we were to look at
7 all malicious programs, ones that are easy to find and
8 ones that are hard to find, would the vast majority of
9 them be the easy to find variety?

10 A Yes, they would.

11 Q And in that scenario, would the percentage of
12 blocks by SONAR appear small?

13 A Yes, they would.

14 Q Now, in Mr. Bromwich's email here, Dr. Cole, what
15 do you understand Mr. Bromwich to be saying about
16 Norton's own view of the value of the Insight and
17 SONAR feature accused of infringement?

18 A He's essentially saying that Insight and SONAR are
19 the critical parts of the system. If we look at that
20 second paragraph, he says the most popular threats are
21 handled by antivirus and intrusion prevention system,
22 but the 90 percent is what matters to the user
23 experience, and that 90 percent is caught by Insight
24 and SONAR.

25 Q Now, to be fair, Dr. Cole, you understand that the

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1 Insight feature is not accused of infringement, right?

2 A That is correct.

3 Q And when was the Insight feature launched?

4 A The Insight feature was launched at the same time
5 of the infringing version of SONAR/BASH. So that
6 would be 2009 in consumer and 2011 in enterprise.

7 Q And do you believe that the Insight feature also
8 is valuable?

9 A Yes, I do.

10 Q Now, I want to go back to the quantitative aspect
11 of this and the idea of easy to find and hard to find
12 malicious programs.

13 If we were to look at all of the malicious
14 programs, easy to find and hard to find, and customers
15 wanted to stop all of them, does a feature like SONAR
16 still play an important role in sales and marketing?

17 A Yes, it does, because it's able to catch those
18 advanced attacks that the other layers are not able to
19 catch.

20 Q Let me show you an excerpt from Exhibit PX607 at
21 1. First, Dr. Cole, what is a competitive battle
22 card?

23 A Competitive battle cards are what organizations do
24 to go in and look at their product, the competitor's
25 product, and then they create this battle card of what

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1 do we need to do to be able to win in the market
2 against our competitors.

3 Q I want to take a look at the how-to-win excerpt on
4 this slide. Can you explain to the jury what the
5 percentages here represent?

6 A So the percentages here are showing how effective
7 are the efficacy of the products. So it's showing
8 that Norton's products have 100 percent detection of
9 advanced malware, and one of their competitors only
10 has 99.6 and 99.7 efficacy in detecting those same
11 attacks.

12 Q Why would Norton want to promote that it did only
13 0.3 percent better than a competitor?

14 A In cybersecurity products like malware, it's all
15 about those decimals. Every product is going to score
16 in the high nineties, but the difference between first
17 and last is sometimes only .3 or .4 percent. And I
18 know that might seem like a small number, but if
19 you're looking at 15,000 different threats occurring
20 on a daily basis, and your product allows .3 percent
21 of those through, that's still a high number of
22 infections, that's still a high number of frustrated
23 customers, and that's still a failure to protect your
24 customers' computers.

25 Q Is the 0.3 percent the unknown and difficult to

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1 detect malware?

2 A Yes, it is.

3 Q I want to talk about the last characteristic that
4 you mentioned.

5 THE COURT: Are you moving on from this?

6 MR. GUZIOR: Pardon?

7 THE COURT: You said, "What is a competitive
8 battle card?" Is this a competitive battle card? Is
9 that why that question was asked?

10 MR. GUZIOR: I will establish the foundation,
11 Your Honor.

12 THE COURT: I also think the date should go
13 on.

14 BY MR. GUZIOR:

15 Q Dr. Cole, is PX607 a competitive battle card?

16 A Yes, it is, and it's from September 2016.

17 Q Thank you, Dr. Cole.

18 On the last characteristic that you mentioned that
19 SONAR contributes to and improves other malware
20 detection features, can you explain how that happens?

21 A Yes. So your traditional defenses like your
22 firewall, intrusion prevention system, and your
23 antivirus engine, those are based on known threats.
24 You have to know about a threat in order for it to
25 catch it. Where SONAR/BASH comes in with the

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1 1 percent is it can catch the unknown threats. It can
2 catch those advanced unknown threats, but something
3 interesting happens. When SONAR/BASH catches an
4 unknown threat, it then becomes known.

5 Now the Norton engineers know about it. They can
6 take that knowledge from the SONAR detection of that
7 known threat, and they can now write signatures, they
8 can write firewall rules, and they can now improve the
9 other defense layers that go before the infringing
10 version of SONAR/BASH.

11 Q Did you prepare an animation to illustrate what
12 you just explained?

13 A Yes, I did.

14 Q Let me show that to you. And can you explain to
15 the jury what this shows?

16 A So on the right-hand side, you have all the
17 computers that are running Norton software with the
18 infringing version of SONAR/BASH. They go in and
19 catch unknown threats. They feed it to Norton's
20 back-end, and then that unknown threat becomes known,
21 and they use it to write new virus signatures for the
22 antivirus engine.

23 Q If SONAR makes a single detection of an unknown
24 malicious program, can that translate into millions of
25 detections of that same program in the future using a

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1 signature?

2 A Yes, it could. And the important thing to point
3 out is, in those block count numbers, if the
4 infringing version of SONAR/BASH catches that threat
5 once, it gets counted as one block. If it then
6 creates a signature that goes in the AV and AV catches
7 100,000, AV gets all the credit, the hundred thousand
8 in the block count, even though it came from a
9 signature detected by SONAR/BASH.

10 Q Thank you for these explanations, Dr. Cole.

11 Before we turn to the apportionment percentages
12 that you provided in this case, I first want to ask
13 you to briefly summarize why we made the jury sit
14 through all of this. Why did this historical context
15 and how did this historical context factor into your
16 thinking about the value of the product feature that
17 you were asked to assume was infringing?

18 A So if we look at a brief history, starting in the
19 late '90s, malicious folks started writing malware
20 that started infecting computer systems. Companies
21 like Norton Symantec started creating anti-malware
22 products in late '90s, early 2000, that would block
23 those threats using traditional defense measures like
24 simple behavioral rules, firewalls, and antivirus
25 engine.

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1 Those worked very well in 2002 and 2003. 2004
2 things started changing. We started seeing more
3 threats coming on the scene. And the professors at
4 Columbia University recognized this changing dynamic
5 landscape and come up with an invention that they
6 created in 2005 using combined models to be able to
7 detect these advanced unknown threats.

8 Then, as we moved through 2005-2006, Norton
9 started struggling, and they tried to solve this
10 problem by acquiring a technology called TruScan that
11 worked initially, but as we moved through 2007, 2008,
12 it just became too much for the traditional defensive
13 measure. It became too much for TruScan.

14 In the 2008 time period, Norton was struggling in
15 the marketplace. They were losing customer
16 confidence. Their efficacy was low. So they went in
17 and rolled out the infringing version of SONAR/BASH in
18 2009 and everything started changing.

19 Their efficacy numbers went up to almost 100.
20 They went from last to first. It was detecting
21 unknown threats. They were differentiating in the
22 marketplace in 2010.

23 2011, they go in and release this infringing
24 version of SONAR/BASH in the enterprise version.
25 2011, at the end, is the first date of the

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1 hypothetical negotiation where SONAR/BASH essentially
2 is a game changer.

3 Then as we go through 2012 and '13, it continues
4 to be a big differentiator in the market which leads
5 us to the second date of the hypothetical negotiation
6 at the end of 2013.

7 Q Thank you for summarizing that, Dr. Cole.

8 Now, when we turn to your apportionment
9 percentages, I want to start with a reminder. What is
10 apportionment -- not a word we use every day -- in the
11 context of a patent reasonable royalty?

12 A At a high level, it's looking at the patents and
13 determining the value that it contributes to the
14 products.

15 Q Now, before we start down this path, are you aware
16 that this case between Columbia and Norton started in
17 2013?

18 A Yes, I am.

19 Q When were you first engaged to provide an
20 apportionment opinion in this case?

21 A In 2014.

22 Q In 2014, did you provide apportionment opinions
23 based on the evidence that was available to you at the
24 time and the instructions that the lawyers provided in
25 2014?

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1 A Yes, I did.

2 Q In 2019, half a decade later, did I ask you to
3 take a fresh look with additional evidence?

4 A Yes, you did.

5 Q Did I ask you to provide your own opinions without
6 some of the constraints that you were asked to follow
7 in 2014?

8 A Yes, you did.

9 Q Do the apportionment percentages that you are
10 presenting at trial today reflect, in your judgment,
11 accurate valuations based on all of the evidence
12 available?

13 A Yes, they do.

14 Q Have you estimated the value of computer security
15 product features previously as part of your
16 professional experience?

17 A Yes, I have.

18 Q Not to repeat too much, but at what companies did
19 you do that?

20 A At Lockheed Martin, I was responsible for the
21 cybersecurity portfolio. So I was responsible for
22 both taking our patents and licensing them out and
23 also looking for gaps in our products and negotiating
24 license with other companies for us to license those
25 products.

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1 At McAfee, since we were a cybersecurity company,
2 that was one of my key roles where I was constantly
3 doing the buy, first build. And in many cases, if
4 there's good technology or good patents, it actually
5 makes more sense to license that technology. You can
6 get there quicker than building it in-house.

7 And then also at Secure Anchor, I'm often brought
8 in by venture capitalists and private equity to look
9 at technology and patents that they want to invest in
10 and determine the value.

11 Q When you assign value percentages to different
12 product features like the ones in this case, is that a
13 mathematically perfect calculation?

14 A No, it is not. It is not a math problem. It's a
15 qualitative estimate.

16 Q Is a mathematically-precise calculation even
17 possible?

18 A No, it is not.

19 Q Why not?

20 A Because there isn't math involved here. You have
21 to look at the products, you have to look at all of
22 the documentation, you have to look at the testimony
23 of evidence, and you have to rely on expert opinion to
24 determine what the estimated value of given features
25 are.

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1 Q When it comes to computer security products, do
2 you often have a quality versus quantity issue like
3 the block count data we discussed earlier?

4 A Yes, you do.

5 Q And is that one of the reasons that you have to
6 look at qualitative factors and professional judgment
7 when you estimate value percentages?

8 A Yes, it is, because as we talked about the block
9 count data, sometimes data can be misleading.

10 Q Let's now turn to the opinions that you provided,
11 the percentages that you provided to reflect the value
12 that Columbia's combined model invention contributed
13 to Norton's products. Did you prepare an animation to
14 illustrate the apportionment steps that you took?

15 A Yes, I did.

16 Q Just give me one moment, Dr. Cole, to get this up.
17 Thank you for your patience.

18 MR. GUZIOR: Mr. Chase, can you take us to
19 Slide 44, please.

20 Q Now, Dr. Cole, what was the starting point, this
21 big yellow box, for your apportionment analysis for
22 the reasonable royalty?

23 A The starting point was to take a Norton product,
24 and that's 100 percent of the accused product price.

25 Q And moving forward in your animation, what is the

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1 first apportionment percentage that you estimated?

2 A The first step is to look at malware detection and
3 determine the percent value that it provides to the
4 overall product.

5 Q Why do you have a range of 60 to 95 percent rather
6 than a single number?

7 A Because on the consumer side with Norton, there's
8 approximately 14 different products that all have
9 different features and, therefore, have different
10 percent allocation.

11 Q We'll talk about that in a moment.

12 Looking at the second apportionment step, what was
13 that?

14 A The second step was to look at SONAR and determine
15 the percent value it provides to malware detection.

16 Q And the final apportionment step, what was that?

17 A Was to look at the patented technology and
18 determine the percent value it provides to SONAR.

19 Q Now, was 35 percent your end number, that the
20 combined model inventions contribute 35 percent of the
21 value to Norton's products?

22 A No, it was not.

23 Q How would you get to the final number in your
24 opinion?

25 A To get to the final number, you'd have to multiply

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1 the value in the green box by the value in the purple
2 box by the value in the red box.

3 Q Sounds like a math problem. But, Dr. Cole, in
4 terms of the size of the number, does that
5 multiplication make the number bigger or smaller?

6 A It makes it smaller.

7 Q And to get to the end, approximately what range of
8 percentages did you ultimately conclude represented
9 the value of Columbia's combined model invention to
10 the accused products?

11 A We have a slide at the end with the exact value,
12 but it's going to be between 4 to 6 percent.

13 Q Thank you, Dr. Cole.

14 Let's start with step one. The value of malware
15 detection functionality in Norton's products, do all
16 of the accused products detect malware?

17 A Yes, they do.

18 Q Is that their predominant function?

19 A Yes, that's the reason why somebody would buy a
20 Norton product, is to protect your computer from
21 viruses and malware.

22 Q In performing your valuation at this first step,
23 did you use any particular consumer product as your
24 baseline?

25 A Yes, I used Norton AntiVirus as the baseline

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1 product.

2 Q Why?

3 A Because during the time of the hypothetical
4 negotiations, 2011 and 2013, Norton AntiVirus was the
5 base product available during that time period.

6 Q Now, looking here at your Slide 48, what factors
7 did you consider to apportion the value of Norton
8 AntiVirus as a whole to malware detection
9 functionality?

10 A So I start off with 100 percent, and then I look
11 at what other features are in the product that don't
12 do malware detection. And in this case, there were
13 two categories; supplemental features, like password
14 manager or browser protection, and other minor
15 features like customer support and power saver
16 settings.

17 Q And is Columbia University seeking a royalty for
18 features that don't do malware detection?

19 A No, it is not.

20 Q To start this discussion, I want to show you an
21 excerpt from PX196, Dr. Cole, what is PX196 and what
22 was the date of the document?

23 A This is what we call a product spec or
24 specification sheet that's available on their website
25 telling people about their product, and it's from

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1 January 2013.

2 Q What did this document tell you about the basic
3 functionality of the Norton Antivirus product?

4 A If we look at the main sentence, it says, "Basic
5 antivirus protection that stops viruses and spyware,
6 so you can safely go online and share." In its
7 high-level description, it's talking about antivirus
8 protection. It's not talking about any of the other
9 supplemental features.

10 Q Now, sticking with this topic, I also want to show
11 you PX323 at page 7. What is this exhibit and what
12 was its date?

13 A So this is an internal presentation from Norton
14 showing customer survey data, and it's from June 2009.

15 Q Was the Norton 360 product sold at the time of the
16 hypothetical negotiations?

17 A Yes, it was.

18 Q Now, Dr. Cole, can you explain what's shown in the
19 bar chart on this slide?

20 A Yes. So on the bar chart, it's a little hard to
21 see, but at the bottom are various components of the
22 product, and they take customer surveys asking them
23 what is most important to them. And first and
24 foremost, what's important to consumers is to protect
25 their computer from viruses, firewalls, hackers,

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1 spyware. Other features, like the password managers
2 and the supplemental features I mentioned are less
3 critical to consumers.

4 Q And, Dr. Cole, let me show you some more
5 deposition testimony from Mr. Wall. Was Mr. Wall
6 designated to speak for Norton on the very issue we're
7 discussing?

8 A Yes, he was.

9 Q Did Mr. Wall's testimony support your opinion that
10 malware detection is the predominant functionality of
11 Norton's products?

12 A Yes, it was. If you'll look at his answer, the
13 major reason why they purchased Norton Security was
14 protection from malicious threats.

15 Q Who is "they"?

16 A They are Norton's customers. So the reason why
17 consumers or customers purchase Norton product was so
18 the consumer could have their computer protected from
19 malicious threats.

20 Q Going back to Norton AntiVirus, what percentage of
21 the total product value did you assign to malware
22 detection functionality?

23 A So starting with the hundred percent, I determined
24 the supplemental features provided 5 percent; the
25 other minor features, 5 percent. That's a total of

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1 10 percent. So when you minus that from 100,
2 90 percent is allocated to malware detection.

3 Q Why did you pick 5 percent as a representative
4 figure for supplemental features and other minor
5 features?

6 A I want to emphasize this is a qualitative
7 estimate. One could state that because the primary
8 reason why somebody is buying Norton AntiVirus is for
9 malware detection, that the supplemental features and
10 minor features would get zero, and you would provide
11 100 percent to malware detection.

12 I wanted to go in and fairly account for those
13 features. So I determined it would be between zero to
14 5 percent. And to recognize those features, assigned
15 5 percent for the supplemental and 5 percent for the
16 other minor features.

17 Q Do all of the other consumer products have
18 identical features compared to Norton AntiVirus?

19 A No, they do not.

20 Q How did you go about using Norton AntiVirus as
21 your baseline for the other products?

22 A So I used Norton AntiVirus as what we call a
23 yardstick or a measuring stick. So I would take
24 Norton AntiVirus, and I would compare it to the other
25 products, and I would say, "Does this product that I'm

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1 comparing to Norton AntiVirus have more features or
2 less features?" and based on that answer, would adjust
3 the percent.

4 Q Now, again, was that a mathematically-precise
5 calculation or judgment?

6 A It was not a mathematical calculation. It was a
7 qualitative estimate.

8 Q Let me show you the next slide.

9 Now, I understand that your base line was Norton
10 AntiVirus, but what did the other two tables for
11 Norton Internet Security and Norton 360 represent?

12 A These are the three products that were being sold
13 by Norton during the time of the hypothetical
14 negotiation.

15 Q What does it mean "Users: 1" under Norton
16 AntiVirus and "Users: 3" under the other two
17 products?

18 A That's what we call entitlement or the number of
19 licenses that you're purchasing with that product. So
20 when you purchase Norton AntiVirus, you're able to
21 install it on one computer. When you purchase Norton
22 Internet Security, you're able to install it on three
23 computers.

24 Q So could we think about Norton Internet Security
25 as three sales of the accused software?

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1 A Yes, you could. That's a great way to think about
2 it.

3 Q Is that significant from a commercial perspective?

4 A Yes, it is.

5 Q Why?

6 A Because if I have three computers at home, and I
7 want to protect it with Norton AntiVirus, I would have
8 to purchase three copies of that software. But if I
9 purchase one copy of Norton Internet Security, it
10 allows me to install it on all three computers.

11 Q Among all the consumer products, is the greatest
12 number of user licenses three?

13 A No, it is not. Some of them have five user
14 licenses, and some of the products have 10 user
15 licenses.

16 Q Now, how did you go about valuing the additional
17 add-on features like spam blocking or parental
18 controls in Norton Internet Security?

19 A So I started off with Norton AntiVirus as my
20 baseline, my yardstick. I then compared it to Norton
21 Internet Security. When I compared it to Norton
22 Internet Security, I realized it had similar features,
23 but Norton Internet Security also had a firewall and
24 other features like spam blocking.

25 So I took the 90 percent from my baseline ruler, I

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1 deducted 5 percent for the firewall, 5 percent for the
2 other minor features to arrive at 80 percent for
3 malware detection for Norton Internet Security.

4 Q In your opinion, Dr. Cole, is assigning 20 percent
5 of the value of Norton Internet Security to
6 supplemental features conservative?

7 A Yes, it is.

8 Q Why?

9 A Because as we have seen so far, the reason why
10 people purchase Norton's products is for malware
11 detection. That's the primary reason, not the
12 supplemental features. So one could provide
13 100 percent of the value to malware detection, but I
14 wanted to make sure that in doing my qualitative
15 estimate, I accounted for those other features and
16 provided a percent value to them.

17 Q And is Columbia seeking a reasonable royalty for
18 those other features that you conservatively excluded?

19 A No, they are not.

20 Q Let's return to the deposition testimony of Dermot
21 Wall. And Mr. Wall says, "The vast majority of the
22 public would think of Norton as a protection, a
23 consumer protection product. In that if you ask a
24 customer which Norton product they have, they will
25 normally just say I have Norton and not know

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1 previously whether they had Norton AntiVirus, Norton
2 Internet Security or Norton 360 or Norton Security
3 Standard, Deluxe, or Premium. They say I have
4 Norton."

5 Does Mr. Wall's testimony support your view that
6 add-on features could fairly be assigned no value?

7 A Yes, they could, because what Mr. Wall is saying
8 is customers really don't pay attention to those
9 add-on features. When you ask a customer, they don't
10 say, Oh, I have this add-on feature or that. They
11 say, I have Norton to protect my computer from
12 malware.

13 So what's really important to the consumer is the
14 protection from malware, not the supplemental
15 features.

16 Q Now, the product feature comparison that we looked
17 at for Norton Internet Security and Norton 360, did
18 you do that for all of the Norton consumer products
19 accused of infringement in this case?

20 A Yes, I did. I did it for all 14 products.

21 Q Now, I'm worried we would hear boos from the jury.
22 We're not going to go through each and every one of
23 those, but did you prepare a slide to summarize your
24 conclusions for each of the consumer products?

25 A Yes, I did.

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1 Q Let me show that to you. Does this table provide
2 your conclusions on the value of each consumer product
3 that should be attributed to malware detection
4 functionality?

5 A Yes, I did. Just to help the jury, software
6 companies like Norton over the years change their
7 product line. So if you look at the left, 2010 to
8 2014, you have three products. Then in 2015, there
9 were two. 2016 to 2019, there were five. So this is
10 just showing the evolution of their products and the
11 value that I assigned to malware detection using the
12 product differential method that I mentioned.

13 Q Now, Dr. Cole, I want to use as an example 2019
14 Norton 360 with LifeLock. And your conclusion was
15 that 60 percent of that product's value should be
16 attributed to malware detection. Do I understand that
17 correctly?

18 A That is correct.

19 Q Now, is Columbia asking for a reasonable royalty
20 on the other 40 percent?

21 A No, they are not.

22 Q Dr. Cole, I have just two questions for you. I
23 thought you said that Norton AntiVirus, 90 percent,
24 was your baseline. Why do you have Norton AntiVirus
25 Basic between 2016 and 2019 at 95 percent?

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1 A In 2010, it was the baseline. That was the base
2 product that was available. I used it as a yardstick,
3 and when I used it as that yardstick, I would compare
4 it to a product and say, Does the product I'm
5 comparing it to have more features or less features?
6 In the case of Norton AntiVirus Basic, when I compared
7 my yardstick Norton AntiVirus, I determined that
8 Norton AntiVirus Basic had less features, and
9 therefore I assigned five additional percent to
10 malware detection.

11 Q Now, you said a few times that assigning
12 apportionment percentages was not a mathematically
13 precise exercise. Was there anything that you did to
14 check your estimations with a more numeric exercise?

15 A Yes, there was.

16 Q What was that?

17 A There's something called price differential
18 analysis that you could go in and use as a spot check
19 or validation of the analysis you do in product
20 feature analysis.

21 Q And, Dr. Cole, did you do that sort of price
22 differential analysis for each of the accused consumer
23 products?

24 A Yes, I did.

25 Q And did you prepare a slide to summarize the price

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1 differential analysis methodology?

2 A Yes, I did.

3 Q Let me show that to you. Now, what was the first
4 step in your price differential analysis?

5 A The first step was to take my baseline ruler,
6 Norton AntiVirus, and determine the apportioned price
7 or the price that would be allocated to malware
8 detection.

9 Q And what was the second step, 2a, in your
10 comparison of that baseline to a different product?

11 A So here I'm comparing it to NIS, which is Norton
12 Internet Security, and in 2a, I'm just looking for the
13 difference in price between Norton Internet Security
14 and Norton AntiVirus.

15 Q And what was the third step in 2b?

16 A In 2b, what I had to account for is in the
17 cybersecurity software industry, when you're adding
18 supplemental features to a base product, you perform a
19 markup of that product because you know that people
20 are going to buy the premium product. So in my
21 experience, we use a 2.5 markup for those additional
22 features.

23 Q And is that consistent with how you would approach
24 supplemental features, or how did you approach
25 supplemental features during your time at McAfee?

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1 A Yes, it is.

2 Q Now, what was the next step in your price
3 differential analysis, 2c?

4 A It was to calculate the Norton Internet Security
5 apportioned price. Essentially, determine what the
6 price would be without the markup.

7 Q And then what was the last calculation that you
8 did dividing 44.99 by 61.99?

9 A This was to determine the percent that would be
10 allocated to malware detection in Norton Internet
11 Security.

12 Q What does the 72.6 percent figure represent?

13 A That would represent for Norton Internet Security
14 the percent that malware detection contributes to the
15 overall product.

16 Q Did you do this type of calculation for each of
17 the accused consumer products?

18 A Yes, I did.

19 Q Did you prepare a table to summarize the results?

20 A Yes, I did.

21 Q Let me show that to you. Did the price
22 differential analysis that you did give you comfort
23 that the qualitative estimations you provided based on
24 product feature comparisons were reasonable?

25 A Yes, it did. Just to help Your Honor and the

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1 jury, on this chart, Method 1 is referring to the
2 product feature analysis that we showed first, and
3 Method 2 is the price differential analysis that we've
4 just shown.

5 Q Now, the Method 2 number seems to be lower than
6 the Method 1 number in a number of cases. Why is
7 that?

8 A That is to be expected. One of the areas with
9 price differential analysis you have to be aware of is
10 it doesn't take into account multiuser licenses. So
11 whether a product has one, three or 10, price
12 differential analysis is not going to take that into
13 account, while the product feature will. So it is
14 naturally expected that your price differential
15 analysis numbers are going to be a little lower
16 because of that.

17 Q Now, Dr. Cole, I want to sort of understand the
18 end result of all of these numbers, but before I do
19 that, I want to show you some testimony from Carey
20 Nachenberg. Remind us, who is Mr. Nachenberg?

21 A He was a Symantec fellow, which is the highest
22 technical position within Norton.

23 Q What did Mr. Nachenberg testify to regarding the
24 value of malware detection to Norton's consumer
25 products?

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1 A He testified that 70 percent of the product would
2 be assigned to malware detection.

3 Q And is that the percentage that Norton's own
4 expert has used in this case?

5 A Yes, it is.

6 Q Now, I want to show you a summary chart here on
7 Slide 59. Dr. Cole, what does the red line on the
8 chart represent?

9 A The red line on the chart represents the
10 70 percent of Norton's expert Mr. Nachenberg.

11 Q What does the dark blue line represent?

12 A That represents the average of my numbers that
13 were applied in this case which would be 74 percent.

14 Q Does your effective average differ significantly
15 from Mr. Nachenberg's 70 percent?

16 A No, it does not. It's within 4 percent.

17 Q Now, we've been talking about consumer products,
18 but did you also estimate a percentage for the value
19 of malware detection functionality in Norton's
20 enterprise product for large companies?

21 A Yes, I did.

22 Q Is the predominant function of that product, SEP,
23 the same as the predominant function of the Norton
24 consumer products?

25 A Yes, it is with that primary function being

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1 malware detection.

2 Q Let me show you some testimony from Archana Rajan.
3 Who is Ms. Rajan?

4 A She worked on the Enterprise product. She was a
5 director, but also she was a corporate representative
6 to talk on this topic.

7 Q Well, did Ms. Rajan's testimony confirm your view
8 that malware detection is the primary function of SEP?

9 A Yes, she does. She emphasizes that we, meaning
10 Norton, are in the security business, that the primary
11 responsibility is to ensure our customers are
12 protected.

13 Q Let me show you Slide 61, Dr. Cole. What does the
14 table in the center, Symantec Endpoint Protection,
15 malware protection 75 percent, what does that
16 represent?

17 A That represents the percent that malware detection
18 contributes to the Enterprise product.

19 Q How did you go about determining that percentage?

20 A First, I went in and did a product feature
21 analysis just like I did with the consumer products to
22 arrive at the 75 percent. As you've seen before, I
23 also like to do validation.

24 So then I used a consumer product as a baseline
25 where you have 90 percent on one end and 60 percent on

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1 the other and felt that the Enterprise version had
2 more features than Antivirus Basic, but it didn't have
3 all the features of consumer protection and LifeLock
4 that the 60 percent did, and therefore determined that
5 putting it in the middle, 15 percent lower, 15 percent
6 higher, than the two endpoints was appropriate to
7 validate the 75 percent.

8 Q Now, again, Dr. Cole, to be honest, is this math
9 or is this a qualitative estimate?

10 A This is a qualitative estimate. This is not math.

11 Q Now, when we started the discussion of your
12 apportionment percentages, I asked you about the work
13 that you did for this case in 2014. Do you remember
14 that?

15 A Yes, I do.

16 Q In 2014, were you also asked to provide an opinion
17 about the value of malware detection to Norton's
18 products?

19 A Yes, I was.

20 Q Was that analysis focused on any particular
21 testimony?

22 A Yes, it was. It was focused on the testimony of
23 Carey Nachenberg's 70 percent.

24 Q Were you given any guidance in 2014 with respect
25 to that testimony?

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1 A Yes. The guidance or assignment was to treat the
2 Carey Nachenberg number as the upper limit and then
3 perform my analysis down from that upper limit.

4 Q In 2014, when you took a fresh look at this
5 assignment, did you come up with your own valuations
6 absent that constraint?

7 A Yes, I did.

8 Q With regard to the consumer products, how do your
9 numbers today differ from your 2014 numbers?

10 A So the numbers today are 60 to 95 percent. And in
11 2014 with that constraint, it was 53 to 70 percent.

12 Q And do the percentages that you provided today
13 represent, in your professional judgment, accurate
14 estimations of the value that malware detection
15 functionality contributes to the accused products?

16 A Yes, it does.

17 Q Now, Dr. Cole, I want to move on to your second
18 apportionment step, but just to reorient ourselves,
19 remind us. What is the second apportionment step that
20 you took?

21 A The second apportionment step is to look at SONAR
22 and determine the value that it provides to malware
23 detection.

24 Q Remind us, how many malware detection features did
25 Norton's products have at the time of the hypothetical

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1 negotiation?

2 A There were four different types of detection.

3 Q Let me show you Slide 63. Dr. Cole, what was your
4 starting point for estimating the value of SONAR, the
5 feature accused of infringement, among the four
6 malware detection features?

7 A So as a starting point, there were four features.
8 So I penciled in 25 percent for each of those features
9 as a base starting point.

10 Q And did you believe ultimately that it was
11 appropriate to weight value in favor of or against
12 SONAR?

13 A Based on looking at everything in this case, I
14 felt it appropriate to weight value in favor of SONAR.

15 Q On that topic, I want to show you Exhibit PX132 at
16 page seven. What is PX132 and what does it state?

17 A This is a paper that Norton puts together on their
18 product feature that they give to potential customers
19 and customers, and the date is 2012.

20 Q Norton said that SONAR is more than an incremental
21 advance. It is a qualitatively different way of
22 classifying and blocking or isolating malicious code.
23 Did the concept expressed here inform your valuation
24 of the SONAR feature?

25 A Yes. Norton is clearly calling out SONAR as a

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1 differentiator, that it was a huge improvement in
2 their products, and also looking at a lot of the other
3 documents we've already discussed, shows that SONAR is
4 able to catch those advanced threats that other layers
5 cannot.

6 Q On this topic, I next want to show you Exhibit
7 PX506 at 26. First, what is this exhibit and what
8 does it state?

9 A This is another internal presentation from the
10 STAR team, which is Symantec technology in response,
11 the team responsible for all the detection methods in
12 the antivirus product, and it's from April 2012.

13 Q And did the last line of defense concept that we
14 touched upon earlier inform your opinion that value
15 should be weighted in favor of SONAR among the malware
16 detection features?

17 A Yes, it did, because there's two key components of
18 this slide. First is download Insight, IPS, that's
19 Intrusion Presentation System, and AV, which is
20 Antivirus Signatures, took a shot and missed.

21 So it's saying that all of the three previous
22 layers missed this malware and SONAR was able to catch
23 it.

24 And the second important part is without SONAR,
25 they would have had a guaranteed infection. So SONAR

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1 was the difference between blocking and protecting a
2 customer and having an infection.

3 Q Now, Dr. Cole, did you prepare a slide to
4 summarize the value percentages that you assigned to
5 each of the malware detection features?

6 A Yes, I did.

7 Q Let me show that to you. Why did your valuation
8 weight against network, including IPS firewall?

9 A So based on the evidence that we looked at, it was
10 determined that SONAR was a critical part and
11 30 percent. That meant that I needed to take
12 5 percent from one of the other layers. Looking at
13 the other three layers, antivirus has a lot of
14 advances and new engines that they're putting in.
15 Reputation and Insight was a key part of the product,
16 and Firewall to Network was more commoditized and
17 therefore determined it was appropriate to lower that
18 to 20 percent.

19 Q Now, I understand that you adjusted your valuation
20 percentages post 2016. Is that right?

21 A That is correct.

22 Q Let me show you this next slide. Does this slide
23 summarize the changes to your valuation percentages
24 for the period after 2016?

25 A Yes. There were two main changes. One is there

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1 was a back-end feature in SONAR that was removed. And
2 there were two new features; sandboxing and memory
3 Exploit Prevention that were added that was assigned
4 10 percent. So the other numbers had to be adjusted
5 to account for that.

6 Q And what was the ultimate percentage that you
7 assigned to SONAR for the post 2016 period?

8 A 23 percent.

9 Q And in your opinion, is that percentage
10 conservative?

11 A Yes, it is.

12 Q Let me direct your attention back to an exhibit we
13 looked at earlier, PX511 at 2, a March 2014 email from
14 Adam Bromwich. With reference to the 90 percent
15 figure, does Mr. Bromwich's email confirm your view
16 that the 23 percent assigned to SONAR is conservative?

17 A Yes, it does, because if you're focused on the
18 advanced newly-crafted threats that Mr. Bromwich is
19 calling out, then one could justify that Insight would
20 get 45 percent, SONAR would get 45 percent, and AV and
21 Firewall would each get 5 percent.

22 Q Now, Dr. Cole, just to put this into context, for
23 the 19 percent that's assigned to Network and the
24 19 percent that's assigned to Antivirus and the 29
25 percent that's assigned to Reputation Insight, is

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1 Columbia seeking a reasonable royalty on those
2 features?

3 A No, they are not.

4 Q I want to move to your final apportionment step,
5 Dr. Cole. And to reorient ourselves, I want to go
6 back to our roadmap. Remind us, what is the last
7 apportionment step that you had to take under patent
8 damages law?

9 A The last step was to look at the patented
10 technology and determine the value that it contributed
11 to SONAR.

12 Q We should probably pause here to talk about
13 vocabulary for a moment. The jury's heard a lot about
14 SONAR and SONAR/BASH. Are there subcomponents to
15 SONAR?

16 A Yes. SONAR has two main components; BASH and BPE.

17 THE COURT: Can you make sure you're saying
18 B, as in bug; P as in peanut; and E as in enterprise?

19 THE WITNESS: That is correct.

20 BY MR. GUZIOR:

21 Q Now, Dr. Cole, which of the subcomponents in SONAR
22 is accused of infringing Columbia's patent claims?

23 A That is only BASH.

24 Q Why did you depict BASH as a brain?

25 A Essentially, because it is the brain. If you look

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1 at how SONAR works, BASH, which stands for behavioral
2 analysis and system heuristics, that's where the
3 machine-learning and combined models takes place.
4 That's what does the heavy lifting of catching the
5 unknown threats and catching the real zero-day
6 threats. So because it's doing the work of catching
7 those unknown threats is why I depicted it as a brain.

8 Q Between BASH and BPE, which subcomponent is more
9 valuable in your opinion?

10 A It would be BASH because BASH is detecting the
11 unknown threats. BPE, they are behavioral policy
12 enforcement. These are just policies that catch known
13 threats. The BPEs are not doing the heavy lifting of
14 catching the unknown threats. That is all done by
15 BASH.

16 Q I want to explore that concept a bit more and show
17 you an excerpt from PX350, a document that we looked
18 at earlier, at page 8. This is from February of 2009.
19 This excerpt says, "BPE, behavioral policy
20 enforcement, policies to block well known and well
21 understood malicious behaviors." Can you explain what
22 that means?

23 A Yes. There are cases where there are some known
24 activity that is bad. For example, if any of you use
25 Adobe PDF, the ability for it to write or execute code

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1 on your computer is very, very dangerous. That's
2 well-known bad behavior. So that's an example where
3 Norton went in and wrote a BPE to cover that. But
4 these BPEs are simple rules that are catching the
5 well-known threats not catching the unknown threats
6 like BASH.

7 Q And is BPE similar to that behavior rule ABC but
8 then you had ABQ that you showed in a graphic earlier?

9 A Yes, that's a great comparison of how BPEs work.

10 Q Let me show you your next slide, Dr. Cole. Is
11 this a chart that you prepared?

12 A Yes, it is.

13 Q What does it show?

14 A It shows that 85 percent of SONAR was BASH and
15 15 percent of the allocation of SONAR was BPE.

16 Q Again, is this a mathematically-precise
17 calculation?

18 A No, it is not.

19 Q What is it?

20 A It's a qualitative estimate looking at all of the
21 documents, the expert testimony, understanding the
22 role that BASH plays versus the role that BPE plays.
23 The qualitative estimate is BASH is significantly more
24 important to SONAR and provided 85 percent.

25 Q Was this the last step in your analysis?

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1 A No, it was not. One more to go.

2 Q Let's talk about that now, Dr. Cole. What is
3 shown on the left-hand side of this slide?

4 A On the left-hand side is one of the patents with
5 one of the claims, but if you look at what's in bold
6 wherein the model is a combined model created from at
7 least two models created using different computers,
8 that's the core invention that's part of all four of
9 the claims that are asserted in this case.

10 Q Were there any particular factors that informed
11 your opinion about the value that Columbia's combined
12 model invention contributed to SONAR/BASH?

13 A Yes, there were three specific ones. First, the
14 combined models is key to the functioning of BASH, and
15 there is no other non-infringing alternatives.

16 Second is the combined models with BASH is a huge
17 improvement over TruScan and how it worked.

18 And the third is the combined models in BASH with
19 something that Norton used in its sales and marketing
20 material.

21 Q Let's briefly touch on each of those. So, first,
22 you mentioned non-infringing alternatives. I want to
23 show you an animation on Slide 74. Do you recognize
24 this or something like this from Dr. Bailey's
25 infringement presentation?

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1 A Yes, I do.

2 Q What do the green and red cubes represent?

3 A Those represent models that are created on
4 individual computers where green is a model of a good
5 program and red is a model of a malicious program.

6 Q Now, moving forward in the animation, what is this
7 showing?

8 A This is showing that those individual models from
9 each of the computers is sent to the Norton computers
10 in what we call GIN, the Global Intelligence Network.
11 GIN creates the combined models and then pushes them
12 back out to the individual computers.

13 Q Now, you said a moment ago that one of the factors
14 you took into consideration in your valuation was
15 there are no non-infringing alternatives. What is a
16 non-infringing alternative?

17 A A non-infringing alternative is an alternate way
18 of accomplishing similar functionality without
19 infringing the patents.

20 Q Did Norton or its experts identify a
21 non-infringing alternative version of BASH?

22 A No, they did not.

23 Q Did Dr. Bailey identify one?

24 A No, he did not.

25 Q What is the practical significance of that?

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1 A The practical significant is if you want to have
2 the value and benefit of the combined models, you have
3 to use Columbia's patents.

4 Q Now, I think the second factor you mentioned,
5 Dr. Cole, was that the combined model invention
6 improved TruScan into something like SONAR/BASH; is
7 that right?

8 A I would be careful because it didn't improve
9 TruScan. It was an improvement over TruScan. The
10 infringing version of SONAR/BASH was a completely
11 different technology than TruScan. So TruScan was
12 their first attempt at trying to solve this problem.
13 It didn't work. And SONAR/BASH, using the combined
14 models, was a huge improvement that did work.

15 Q Thank you for correcting me on that, Dr. Cole.

16 On that topic, I want to show you an excerpt from
17 Exhibit PX482 at 64 from April of 2012. First, what
18 is this document?

19 A This is a planning document for STAR which is the
20 Symantec technology in response, the group responsible
21 for all the detection methods. And as you stated,
22 it's from April of 2012.

23 Q Remind us, at the time of the hypothetical
24 negotiations, was TruScan an effective product
25 feature?

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1 A No, it was not.

2 Q With reference to Symantec's internal document
3 PX482, can you explain the difference between TruScan
4 and SONAR/BASH that is noted?

5 A Yes. It's important to note for the jury, this is
6 one of many differences, but the difference here is
7 TruScan was based on a hand-weighted scoring engine,
8 and because it was hand-weighted, there's a manual
9 component, it wasn't able to have a high number of
10 attributes and wasn't effective at catching the
11 advanced malware.

12 SONAR 4.0, which was one of the infringing
13 versions of SONAR, it had machine-learning with
14 combined models and was able to track significant
15 amounts of attributes and was highly effective at
16 catching zero-day attacks.

17 Q Now, Dr. Cole, the third factor you mentioned --

18 THE COURT: Now, I'm going to interrupt you,
19 Mr. Guzior. We're coming close to where things should
20 end. How much more do you have?

21 MR. GUZIOR: I probably have five to 10
22 minutes, but if you want to take a lunch break, I'm
23 happy to continue after.

24 THE COURT: Can you guys do five to 10
25 minutes?

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1 THE JURY: (Nodding heads.)

2 MR. GUZIOR: I saw some head shakes no.

3 THE COURT: All right. Okay. Just a little
4 more to go.

5 No offense, Dr. Cole.

6 THE WITNESS: Okay.

7 BY MR. GUZIOR:

8 Q Now, the third factor you mentioned, Dr. Cole, is
9 that the combined models invention gave Norton certain
10 abilities to promote their product in sales and
11 marketing materials. Did I get that one right?

12 A Yes, you did.

13 Q What does that have to do with Columbia's combined
14 model invention?

15 A As a software inventor, if you have a feature
16 that's very important that you want to use to
17 differentiate, you'll want to tell your customers or
18 future customers about it and put it in sales and
19 marketing. And that's what happened in this case
20 where Norton was telling potential and future
21 customers about the value of the combined models
22 within SONAR/BASH.

23 Q And I want to show you on this issue an excerpt
24 from Exhibit PX192. And, first, Dr. Cole, what is
25 PX192 and what is its date?

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1 A This is a page from Norton's website that's
2 publicly available for customers, potential customers
3 to look at. And it's from early 2012.

4 Q What does this have to do with Columbia's combined
5 model invention?

6 A This is Columbia's combined model invention. So
7 you have Norton Community Watch Program. Those are
8 the individual computers that are running SONAR/BASH
9 that are creating the individual models that we saw on
10 a previous slide.

11 Then when it talks about largest database of
12 behavioral profiles on nearly 200 million
13 applications, that's taking those individual models,
14 bringing them into the global intelligence network and
15 creating the combined models.

16 Q Now, on this same topic, Dr. Cole, I want to move
17 forward and show you Exhibit PX132 at page 8. What is
18 this document and what was its date?

19 A This is another public document that Norton puts
20 out on its application behavior malware protection
21 ,and this is from 2012.

22 Q What does the first bullet on this slide mean?

23 A "More than 50 million active participants." These
24 are the individual computers that are running Norton's
25 products with the infringing version of SONAR/BASH

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1 that are creating the models that are being sent up to
2 the global intelligence network.

3 Q Now, I want to turn back to your valuation
4 percentages, Dr. Cole. Did you take each of the three
5 factors we just discussed into account when you
6 estimated the value that Columbia's combined model
7 invention contributed to SONAR/BASH?

8 A Yes, I did.

9 Q Let me show you your next slide. Is this a chart
10 that you prepared?

11 A Yes, it is.

12 Q Can you explain the percentages to the jury?

13 A So if you remember earlier, I assigned 85 percent
14 to BASH and 15 percent to BPEs. Of that 85 percent,
15 50 percent was assigned to non-infringing features
16 such as API hooking and machine-learning, and
17 35 percent was assigned to Columbia's patents.

18 Q Now, once again, Dr. Cole, was this a
19 mathematically-precise calculation or an estimation
20 that you had to make based on qualitative
21 considerations?

22 A It was a qualitative estimate. This was not a
23 mathematical calculation.

24 Q Okay. Now, not to stand between people and lunch,
25 Dr. Cole, I'm going to move forward a couple slides.

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1 Did we just cover your last apportionment step?

2 A Yes, we did.

3 Q And once again, Dr. Cole, was 35 percent a number
4 that you chose to represent the value of Columbia's
5 inventions as part of Norton's overall products,
6 35 percent?

7 A No, it was not.

8 Q And, again, did you prepare a table to summarize
9 that percentage that you ultimately calculated?

10 A Yes, I did.

11 Q Let me show that to you. Dr. Cole, can you
12 explain to the jury the summary that's shown on this
13 slide?

14 A Yes. So, essentially, you have to multiply those
15 three numbers. You take the malware percent, multiply
16 it by the SONAR percent, multiply it by the Columbia
17 percent, and for consumer products, you add 5 to
18 8 percent of the contribution of Columbia's patents to
19 Norton's products. And for Endpoint Protection, it's
20 6.3 percent.

21 Q Now, Dr. Cole, using Endpoint Protection as an
22 example, is Columbia asking the jury to award it a
23 royalty based on the other 93.7 percent of the
24 product?

25 A No, it is not.

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1 Q So Columbia is asking for a reasonable royalty
2 just on this 6.3 percent slice; is that right?

3 A That is correct.

4 Q Now, at the beginning of the case, the jury heard
5 about the reasonable royalty, the amount of money
6 Columbia was requesting as a royalty for the alleged
7 infringement. Are the 5 to 8 percent numbers that the
8 jury sees here the reasonable royalty?

9 A No, it is not.

10 Q Why not?

11 A I perform the apportionment, but then these
12 numbers get passed to my colleague, Dr. Sullivan,
13 who's an economist, and he performs calculations to
14 arrive at the reasonable royalty.

15 Q And does that make these numbers bigger or
16 smaller?

17 A It makes these numbers smaller.

18 Q Thanks.

19 Dr. Cole, focusing on all of the evidence that we
20 talked through and marched through today around the
21 time of the hypothetical negotiation, do you believe
22 that these are conservative numbers?

23 A Yes, I do.

24 Q Why?

25 A Because if you looked at all the evidence, the

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1 infringing version of SONAR/BASH was a game changer
2 for Norton. Prior to 2009, customers were losing
3 confidence. They were losing market shares to
4 competitors like McAfee. Their efficacy numbers were
5 low.

6 They then release the version with the -- they
7 then released their product with the version of
8 SONAR/BASH that infringes and everything changed.
9 They started leading the pack. They started
10 differentiating from their customers, and their
11 efficacy numbers were near 100 percent.

12 MR. GUZIOR: Thank you, Dr. Cole. I have no
13 further questions, Your Honor.

14 THE COURT: All right. So we will take our
15 lunch break now. We'll come back at 2:20. We will
16 have an hour break. And I hope you all enjoy your
17 lunch. And we'll see you, I suppose, with
18 cross-examination, if there is any, of Dr. Cole.

19 All right. Thank you.

20 (The jury exited the courtroom.)

21 THE COURT: All right. Is there anything
22 else we need to cover before lunch?

23 MR. MORIN: Yes, Your Honor, if I may
24 approach.

25 THE COURT: Okay.

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1 MR. MORIN: I echo Mr. Guzior's sentiments
2 about not delaying your lunch, but if we could get
3 Slide 41 on the screen, please, from our friends.

4 Your Honor, as you're well aware, you made a
5 ruling on motion in limine, No. 1, that prohibited us
6 from using block count data from 2015 to '19 to show
7 that in fact the attributes of the patented technology
8 were not as valuable, and we had not yet made the
9 product perform well at that time.

10 Your Honor kept it out. That is docket
11 No. 903. Your Honor kept it out, finding that it was
12 not admissible under the book of wisdom. So I was
13 therefore surprised to see that our friends put up
14 Slide 41, not only put it up, but expanded the portion
15 that talked about June 2015 to June 2016 and
16 100 percent protection and 100 percent protection in
17 the reference set in 99.6 percent, suggesting to the
18 jury certainly that the patented technology
19 contributed to that high performance.

20 At this point in time, we think they've
21 clearly opened the door to cross-examination of the
22 block count data from the 2014 to '19 timeframe to
23 challenge the suggestion that this high performance
24 that they've not only put on the exhibit but expanded
25 and blown up for the jury had anything to do with the

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1 patented technology.

2 So we think that door has been opened. I
3 wouldn't have bothered the Court before lunch, but I
4 know you want me to not wait until after lunch. And,
5 of course, I was going to approach you with permission
6 before just launching into the cross-examination.

7 THE COURT: No. This is the appropriate
8 time.

9 MR. GUZIOR: Your Honor, may I respond?

10 THE COURT: Of course.

11 MR. GUZIOR: There's a mixing of apples and
12 oranges. What the Court excluded was Dr. Jaeger using
13 the shifting of the data that showed a shifting of
14 credits for blocks from BASH to BPE.

15 Dr. Cole didn't say one word about that. We
16 were very conscious of Your Honor's ruling on the
17 motion in limine, and the broad count split between
18 BASH and BPE did not come up at all.

19 Similarly, Your Honor, we did not touch block
20 count data as between the four malware detection
21 features that postdated the hypothetical negotiation.
22 We used the 2012, 2013, early 2014 data only just to
23 show to the jury that BASH was detecting 1 percent,
24 but to make the point that 1 percent means it's the
25 most valuable product feature.

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1 What we're showing here from PX607 is all
2 broad principle. I could have used a 2012 document
3 for this. I could have used Archana Rajan's testimony
4 for this. There's nothing special about 2016. And I
5 would be happy to, if this was an issue, to have it
6 struck from the record, and we could replace it with
7 2012 information that would show the exact same thing.
8 This has nothing to do with the issue that Mr. Morin
9 now wants to get into, which is to open up the 2014 to
10 2019 BASH BPE split.

11 This slide simply has nothing to do with
12 that. This is a broad principle that competitors were
13 fighting at the sub 1 percent level, and I could have
14 used 2012 or any other date for it. This is pure
15 coincidence.

16 THE COURT: All right.

17 MR. MORIN: May I respond, Your Honor?

18 THE COURT: Of course.

19 MR. MORIN: Your Honor, the idea that he
20 could have used another document when it was obviously
21 a very well planned out direct examination, what Mr.
22 Guzior didn't do is, for example, only blow up the
23 value and say 100 percent is what mattered. He showed
24 to the jury and had it in front of the jury blown up
25 the idea that 2015 to 2016 was 100 percent.

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1 We certainly should be able to challenge and
2 say that that high level of protection had very little
3 to do with the patented technology once he
4 affirmatively introduces that to the jury, Your Honor.
5 So we think he's opened the door.

6 THE COURT: All right. This time I'm going
7 to read through my motions ruling. We'll come back at
8 quarter of, and I'll make a ruling whether there will
9 be cross-examination or not.

10 MR. GUZIOR: Thank you, Your Honor.

11 MR. MORIN: Thank you, Your Honor.

12 THE COURT: Thank you very much. We'll see
13 you at quarter of two.

14 MR. MORIN: Quarter til, Your Honor?

15 THE COURT: Quarter after. I said 2:20. So
16 I will see you at 2:05. Those are just qualitative
17 estimates of time. 2:05.

18 MR. MORIN: 2:05. Thank you, Your Honor.

19 (Recess taken at 1:30 p.m.)

20 (The trial resumes on the next page.)
21
22
23
24
25

1 (The trial reconvened at 2:13 p.m.)

2 (The jury is not present.)

3 THE COURT: All right. I do have some
4 questions, and, Mr. Guzior, I want you to answer why you
5 think you haven't opened the door.

6 So if you look at slide 67, you're talking about
7 the post 2016 value of SONAR, and then in slide 27, you're
8 talking about the value of SONAR versus BPE. And I did
9 rule that Dr. Jaeger was relying on unreliable figures,
10 which he was, and importantly, he was relying on 2015 and
11 2016 that were entirely interpolations. He didn't try to
12 pretend that was any kind of actual calculation.

13 But I also ruled that Norton didn't provide any
14 evidence among the types of information they would have
15 anticipated looking for when negotiating, and I actually
16 said nothing in the record indicates the parties would
17 have anticipated this. So I'm going to hear from you.
18 That's from Document 903 at pages 4 and 5.

19 MR. GUZIOR: May I approach, Your Honor?

20 THE COURT: Of course.

21 MR. GUZIOR: When it comes to the accused
22 products that Norton sold, the federal circuit requires
23 that Columbia seek a royalty on no more than what the
24 patented technology contributes to any given accused
25 product.

1 What we have in this case is a little bit
2 unusual because of the duration of the litigation. So the
3 problem -- and the reason Your Honor saw post 2016 numbers
4 that nobody has ever disputed is because new versions of
5 Norton's software were released from 2011 through the
6 present. New products have even been released between
7 2019 and the present. And we would get reversed at the
8 federal circuit if we didn't take into account the new
9 product features.

10 So, for example, on the slide 67 that Your Honor
11 referenced showing post 2016 value of SONAR, Dr. Cole
12 notes at the bottom of the slide that there were two new
13 features released, a sandboxing feature and a memory
14 exploit prevention feature, and those had not previously
15 been in the product.

16 Now, that's not a hypothetical negotiation
17 issue. That's an issue of if we're going to seek damages
18 on that product, we're legally required to take into
19 account that the total sales price includes the value from
20 those new features.

21 That's different from talking about the value of
22 the infringing feature that has not changed. And
23 Your Honor will hear testimony over the coming days, in
24 the cross-examination of Norton's witnesses, that the
25 source code for the infringing feature has not been

1 touched since 2013. And that's really where we have a
2 problem with the book of wisdom and the issue that
3 Your Honor ruled upon in response to our motion in limine,
4 and that's that what Dr. Jaeger does is he doesn't look at
5 what the parties would have known about that technology at
6 the time of the hypothetical negotiation. He looks at the
7 way that Norton chose to credit one component of SONAR
8 versus another. It's just a choice about which feature
9 gets the count after the hypothetical negotiation, 2015 to
10 2019.

11 And as Your Honor pointed out, half of those
12 data points for individual years are not even data. We
13 don't know what the number is, which is strange because as
14 we put in our briefs, Norton's 30(b)(6) witness, Jokul
15 Tian, testified that they produced block count data every
16 day, but Norton did not provide that block count data for
17 any of the years, and Dr. Jaeger is relying on a guess.

18 So when it comes to the block count data for
19 BASH versus BPE and this counting of function call in a
20 decision tree exercise that Dr. Jaeger did, that's
21 something entirely different from what Dr. Cole was
22 talking about, which is the fact that we accused different
23 products with new features of infringing and there were
24 products with new features released after the date of the
25 hypothetical negotiation that infringed the patents

1 because of the same SONAR/BASH technology.

2 And so I don't think, Your Honor, that we opened
3 the door by acknowledging that we can't claim a royalty on
4 memory exploit prevention or on the sandboxing feature
5 that was introduced in 2016. That's something we have to
6 do. We would be reversed on that if we didn't do it, but
7 that doesn't mean that we've opened the door to Norton
8 coming in and saying, well, now we can use this
9 information, half of which is just speculation. We have
10 no idea what it is. It's for a product feature that
11 hasn't changed since the date of the hypothetical
12 negotiation, SONAR/BASH, to try to create the impression
13 that the feature is less valuable than it was. And I
14 think all of the evidence Dr. Cole reviewed this morning
15 shows how valuable that product feature was at the time.

16 THE COURT: Well, let me ask you this. Weren't
17 they trying to show -- and I think they would concede that
18 maybe it would not have been anticipated, but aren't they
19 trying to show that BPE started doing more than BASH,
20 detecting more?

21 MR. GUZIOR: That's what -- well, that's what
22 they're trying to use the data to show, Your Honor, but
23 there's no indication that anyone would have contemplated
24 that at the time. And Dr. Jaeger's testimony, Your Honor,
25 was that he didn't even know if the BPE system could

1 develop as it did in the absence of SONAR/BASH. It's not
2 a new product feature that was introduced at a later date.
3 It's a product feature that depended on the performance of
4 the infringing functionality.

5 And we think, Your Honor, what the parties would
6 have talked about at the hypothetical negotiation is what
7 do we know about BASH and BPE. Those are both features
8 that existed at the time of the hypothetical negotiation.
9 BPE is not a new feature that came in at a later date,
10 like sandboxing or memory exploit prevention. It existed.
11 And what the parties would have done at the hypothetical
12 negotiation is say what do we know about BASH and BPE now?

13 And there's zero evidence in the record to
14 support the idea that the hypothetical negotiators would
15 have foreseen that BASH would have performed so well that
16 they could convert some of its predictions into BPE rules.

17 And that's a foundation question. They could
18 have developed the case differently. I don't think they
19 could have supported it, but they could have put in an
20 expert opinion from an economist saying, I believe that
21 the parties could have anticipated that. But there's no
22 such evidence in the record.

23 THE COURT: So you're saying that even though,
24 likely, they couldn't have anticipated sandboxing and
25 memory exploit prevention, that can be taken into account

1 because it's -- are all the things that Dr. Cole is using
2 with respect to the different technologies of the
3 different products, are they all new?

4 MR. GUZIOR: Yes. So that's -- that's the
5 distinction, Your Honor. The memory exploit prevention
6 feature and the sandboxing feature were introduced in
7 2016.

8 And just the same as if you were to sell a
9 blender, let's just say as a random example, and then
10 three years later you add to that blender a new component
11 that allows you to slice cucumbers, just -- I'm coming up
12 with this on the spot. You wouldn't be able to say, in a
13 patent infringement case, that you don't have to take into
14 account that the feature to slice cucumbers was introduced
15 at a later date. You have to apportion. But that's a
16 question of a new feature that was introduced, a new
17 product, if you will. And it's not a question about
18 technology that existed at the time of the hypothetical
19 negotiation where unforeseen statistics -- half statistics
20 and some of it speculation -- could not have been foreseen
21 as to that technology that existed at the time.

22 And so we're not really saying that the
23 sandboxing and the memory exploit prevention would have
24 been foreseen at the time of the hypothetical negotiation.
25 It wouldn't have been. But because of the way that this

1 litigation has played out over so many years, we simply
2 have to deal with the fact that the new features in the
3 product came into existence. And we can't claim a royalty
4 on that. I hope it makes some sense.

5 THE COURT: It does.

6 Okay. I'll hear from Norton.

7 MR. MORIN: Thank you, Your Honor. For the
8 record, of course, we disagree with the ruling on the book
9 of wisdom, but that aside, my primary objection -- the
10 motion in limine that you granted, Your Honor, didn't
11 say -- in fairness to my friends, it didn't say you can't
12 refer to anything that happens after the hypothetical
13 negotiation. They talked -- many slides talked about the
14 subsequent years.

15 I was only looking at -- and I intend to cross
16 him on the general market, then, because he's talking
17 about the functional features. I think we're only
18 disputing the BPE count specifically and that motion in
19 limine, and my point there was, Your Honor, that when he
20 put up a slide in 2016 and highlighted for the jury that
21 it was nearly 100 percent effective against the viruses,
22 that could give the wrong impression and he chose to do
23 that, that that had something to do with the -- or more
24 than it should have had with the patent and functionality,
25 and we should be able, at that point in time, to rebut

1 that impression that would be left with the judge -- with
2 the jury -- I'm sorry, Your Honor -- having to do with the
3 use of those features. So that was my bigger point was
4 about the BPE data.

5 I think there's obviously common ground that
6 they can look to the additional features, and we'll cross
7 on the subsequent market as well.

8 We, in fairness, for the record, think that that
9 opened up the book of wisdom also, but we're not here to
10 redebate that. My smaller point here for today was they
11 showed the jury something that suggested that the product
12 is working great, nearly 100 percent in 2016. I should
13 then be able to cross and show that it has less to do with
14 the patented technology once they have done that.

15 But I do think there's common ground that when
16 there's new features added, it's fair to bring that into
17 the apportionment analysis. I'd love to fight with him
18 and say that that opened the door, but I'm mindful that
19 Your Honor wants us to work in good faith towards
20 solutions so I'm not going to make that argument. I will
21 cross generally on the market. This has to do with the
22 specific motion in limine that you granted having to do
23 with the block count data, and I just -- I don't think it
24 would be fair for them to leave the impression that the
25 patented functionality is somehow -- has more to do with

1 that than it actually did once they put that on the
2 screen.

3 THE COURT: So I'm going to ask you, Mr. Morin,
4 how is it that you do that? How do you cross on that
5 issue discreetly?

6 MR. MORIN: On the block data?

7 THE COURT: Uh-huh. From 2016.

8 MR. MORIN: I would say, for example -- could we
9 excuse Dr. Cole for a moment?

10 THE COURT: Absolutely.

11 MR. MORIN: Thank you.

12 Dr. Cole, I'm sorry.

13 THE COURT: And Dr. Sullivan too, probably.

14 MR. MORIN: Thank you. I was going to give him
15 all my cross questions.

16 (Dr. Sullivan and Dr. Cole exited the
17 courtroom.)

18 MR. MORIN: It would be along the lines of you
19 pickup a slide indicating that this was very successful,
20 at near 100 percent in 2016, even years after the
21 hypothetical negotiation. Sir, you've seen some block
22 count data -- and I don't have to use the interpolated
23 data. I'll just use the actual data, Your Honor. You've
24 also seen numbers that show that the use of the patented
25 feature, the allegedly patented feature -- he's got me

1 doing that now -- the patented feature was declining over
2 time and as a matter of fact, had less to do with the
3 performance of the product in that and subsequent years.

4 It would be on those lines, Your Honor.

5 THE COURT: So the lines -- the years that were
6 actual years -- so one problem with these figures is
7 there's none in 2011, right? There are no figures for the
8 time of that hypothetical negotiation. And I don't think
9 that Dr. Jaeger gave terrific testimony about the
10 underlying basis for it. So he did 2012 and 2014 were
11 accurate, and then he says 2017 and '18 were accurate.

12 But first, let me ask you this. Did Norton give
13 any of this information to Columbia? They said they
14 didn't get any block count data.

15 MR. MORIN: I think that would be mistaken,
16 Your Honor. In Dr. Cole's supplement to his reply, he
17 repeats the same -- may I use the ELMO, please?

18 THE COURT: Sure.

19 MR. MORIN: Thank you.

20 THE CLERK: It takes just a second for it.

21 MR. MORIN: Thank you. Hopefully, it will
22 autofocus.

23 THE COURT: Yes, I know he uses the same chart,
24 but did he have the same underlying data for the chart?

25 MR. MORIN: Yeah. My point, Your Honor, is he's

1 footnoted below where those particular years came from,
2 and you see Symantec production numbers 2017, an exhibit
3 number for 2018. So he does indicate production numbers
4 for sourcing that.

5 THE COURT: Well, you certainly can't use the
6 interpolated years.

7 MR. MORIN: Yes, Your Honor.

8 THE COURT: Let me see what it says.

9 MR. MORIN: Would you like it back on the ELMO
10 or you've got it handy?

11 THE COURT: I have it. Thank you.

12 MR. MORIN: Thank you, Your Honor.

13 THE COURT: All right. I'll hear any response.

14 MR. MORIN: Thank you, Your Honor.

15 MR. GUZIOR: Your Honor, on the point about
16 receiving the data, the issue is that we repeatedly asked
17 for the data that's relevant. We wanted 2009, 2010, 2011
18 and 2013, with 2011 being the year of the first
19 hypothetical negotiation and 2013 being the year of the
20 second, and we didn't get it. They produced what they
21 wanted to produce, and we complained.

22 And then even going forward from 2013, they
23 produced only some years. And we don't know what happened
24 in the middle. It could have been that BASH was
25 100 percent. But Dr. Jaeger, as he admitted at his

1 deposition, didn't know and just guessed that it went
2 down.

3 And so the point on production, I agree with
4 Norton's counsel that we received for the years that they
5 wanted to show. The problem is what about the rest of the
6 picture, and in particular, the data for the years of the
7 hypothetical negotiation? That's not produced.

8 Dr. Jaeger doesn't have it. We don't have it,
9 and it's strange because Norton's 30(b)(6) witness said
10 they make this data every day. So we don't know where
11 that is. That's point one.

12 Point two, Your Honor, is on predictability of
13 trial presentation. You know, we had the motion in limine
14 ruling on this issue, and if we had known that this was
15 going to come up, we would have covered it in Dr. Cole's
16 direct examination. We would have explained the evolution
17 of BPE. We would have explained that BPE functions only
18 because of BASH. We would have explained that the way
19 that BPE changed was because of how successful BASH was,
20 and I was very careful not to open the door. We didn't
21 show any of the block count data for BASH versus BPE, the
22 subject of Your Honor's ruling on our motion in limine
23 number 3 even though that block count data is quite
24 favorable for us in the one relevant year they gave us,
25 which is 2012.

1 And we said we're not going to risk it, we're
2 not going to put it up and open the door on this. And I
3 do think Norton's counsel is latching on to something that
4 is quite far out there as a basis for opening the door
5 where the simple point that we were making with the
6 document, the competitive battle card document -- the
7 99.6, 99.7, 100 -- is the competition between Norton and
8 other antivirus companies happens at the sub 1 percent
9 level. That was true in 2011. It was true in 2013, and
10 it's true today.

11 And I do think, a little bit, Norton's counsel
12 is latching on to a hyper technicality looking for, oh,
13 there was one document in here from 2016, and I would just
14 plead with Your Honor that we didn't open the door. We
15 would have handled this presentation differently if we
16 thought that the ruling on the motion in limine was going
17 to change.

18 THE COURT: Well, let me ask you that. Is the
19 cure that you just do redirect with Dr. Cole?

20 MR. GUZIOR: I don't think so, Your Honor,
21 because the cross-examination on this, this is something
22 that we would have wanted to cover first in order to
23 appropriately explain the issue to the jury.

24 Additionally, we do think that it's inadmissible
25 evidence that's highly prejudicial. In the middle of this

1 litigation, they chose to -- in the partial data that they
2 gave us, many years missing -- to shift what they would
3 credit with a block count from BASH to BPE. It's long
4 after the hypothetical negotiation. I think Your Honor's
5 ruling that it's not relevant is right.

6 THE COURT: So what's your evidence to that,
7 that they shift it?

8 MR. GUZIOR: Because there's a change that
9 happens only in the middle of the litigation, and in the
10 years where the change happens, they haven't produced any
11 data. As I said, we don't know what it looks like. It
12 could be 100 percent BASH. It could be -- it could be
13 10 percent BASH, but they had the data and they didn't
14 give it to us.

15 And we do think it's highly prejudicial,
16 Your Honor, if on cross they get into the fact that in
17 2019 there was an 8 percent block count for BASH, I do
18 think that will be prejudicial to Columbia's case when the
19 evidence is inadmissible.

20 THE COURT: All right.

21 MR. GUZIOR: Thank you, Your Honor.

22 MR. MORIN: Briefly, Your Honor. Very, very
23 briefly, Your Honor. First of all, we've been very
24 cognizant of bringing things to Your Honor's attention
25 first. That slide 41, they chose not to just blow up that

1 we want to get near 100 percent. They chose to blow up
2 for the jury 2016 data of near 100 percent and
3 99.6 percent. They chose to blow that up.

4 Your Honor, when we exchanged demonstratives
5 last night, they took advantage -- not unfairly -- of a
6 rule in the pretrial order that says you don't have to
7 exchange demonstratives that are only the exhibits that
8 are blown up. If I had gotten this last night, I could
9 have raised it with them. They chose not to give it to me
10 last night. They chose to hand it to me in the middle of
11 this morning. So I had no prior notice that they were
12 going to blow up that section of the document and display
13 it to the jury. So I raised it as soon as I possibly
14 could, which was before the lunch, so Your Honor could
15 think about it and address it.

16 I will tell you that they talk about the years
17 that are produced. I know I should know. I'm responsible
18 for knowing why certain years were produced, but I will
19 note the 2012 data is aligned with a large number of their
20 slides that relied on 2012 information. So it's right in
21 the sweet spot, and I will not imply or infer anything
22 about the data other than the specific years that were
23 actually produced. And that's all I have on it,
24 Your Honor.

25 THE COURT: All right. Okay. Well, this,

1 again, I think, raises the issue where we have new
2 counsel, new counsel who's doing the job they are hired to
3 do, former counsel unable to inform them about what
4 happened, and they're not pretending to say that they know
5 what happened.

6 I do know that my record shows that they -- for
7 whatever reason, Symantec did not produce any real data
8 for really the most relevant years, especially those 2015,
9 2016 when this drop started happening. I don't --
10 according to Norton, I don't have any reason not to take
11 Mr. Guzior at his word that Norton has this information
12 and they -- they do it regularly. I think he said -- let
13 me look.

14 MR. GUZIOR: Your Honor, it's in the testimony
15 of Jokul Tian, and we can provide a copy to Your Honor.

16 THE COURT: And how frequently did he say or she
17 say -- I didn't hear you.

18 MR. GUZIOR: He said daily.

19 THE COURT: Daily. All right. Well, I
20 certainly -- that is in the record, and I'll take
21 Mr. Guzior's representation of that, and I don't hear that
22 Norton is challenging that representation.

23 MR. MORIN: I'm not in a position to do so,
24 Your Honor.

25 THE COURT: All right. So Norton apparently

1 counts this information daily and did not produce, for
2 some pretty important years, including the year that this
3 slide speaks to. I am -- you guys, I just -- just
4 exchange the demonstratives. I guess you're playing
5 chicken with each other. You're not going to be the first
6 to do it and then not have the other side not do it, and I
7 guess it's litigation, but it's not a particularly good
8 use of judicial resources.

9 I do think there is -- when you look at what
10 Dr. Jaeger said, his testimony is confusing at best, and
11 it doesn't lay a particularly good foundation, if any
12 foundation at all. He says he didn't do a quantitative
13 assessment, which is okay.

14 He says, "Then a number of attributes in
15 SONAR/BASH" -- this is at page 238 of his deposition --
16 "SONAR/BASH appear to be associated with not function
17 calls but something else. Probably data, I would
18 envision. And so a program, when you assess a program,
19 the program has a control flow graph and a data flow
20 graph, and so one potentially could replace the attributes
21 associated with function calls with those associated --
22 well, not associated with function calls but rather with
23 the data that's being processed by the program."

24 And the question is, "And that's your
25 qualitative assessment? You've not actually tested

1 whether the theory would impact performance
2 quantitatively?"

3 And he says, "I have not quantitatively assessed
4 that, but there's a large number of these attributes that
5 appear to be related to data. Those could be counted."

6 Now, I'm going to tell you, I think this says
7 almost nothing comprehensible. I think it would be
8 prejudicial and confusing to place his data information or
9 basis on the record.

10 And it is the case that he talks about SONAR and
11 BPE, and he indicates that there is some independent data,
12 not independent data for the years at issue here, just
13 interpolations. And to make the record clear, he says,
14 "The independent data are 2012, '14, '17, and '18." And
15 that includes nothing between 2009, 2010 or 2011 or 2013,
16 which is -- '11 and '13 are the years of the hypothetical
17 negotiation.

18 And I don't think that cross-examining -- using
19 any of these kinds of numbers is fair, whether or not 2017
20 or '18 are accurate. The underlying change, the fulcrum
21 as to why they started going so low or how they started
22 going so low is not established by Dr. Jaeger, and he says
23 he didn't ask Symantec for the information in the
24 interpolated years, and he says he probably -- it's
25 possible he would have used it if he had asked for it, the

1 actual data.

2 And then he says that "between 2012 and the
3 present, Symantec has introduced new BPE signatures at
4 least some of which are generated from BASH submissions,
5 correct?"

6 And he says, "That's my understanding, yes."

7 "Did you do any quantitative analysis or
8 modeling to determine whether the block share attributed
9 to BPE would have increased from 2012 to the present in
10 the absence of BASH?"

11 "No, I did not do a quantitative assessment of
12 that question."

13 So I certainly think it is the case that
14 Dr. Jaeger established that BPE was informed, at least, or
15 trained, at least, by -- by BASH, and it's creating
16 information in the manner I think that Dr. Cole has just
17 testified to.

18 But with respect to the numbers in 2017 and
19 2018, I don't think that they have opened up the door to
20 those specific numbers. First, 2015 and '16 are
21 interpolations. They go from 55.3 percent to
22 37.2 percent, and then suddenly, the actual number in 2017
23 is 10 percent. And then in 2018, it's 8 percent. And I
24 am not certainly indicating that these lawyers have
25 participated in the lack of production of necessary

1 information to Columbia, but it is the case that if they
2 had that information, they could -- they could speak to
3 what the numbers were in 2017 and 2018. And absent Norton
4 having produced that information, I think it's too
5 prejudicial and confusing to the jury, which is nothing
6 this set of lawyers did. But they are pleading ignorance
7 and they are stuck with the record as it developed here.

8 I think it is fair to ask some questions about
9 whether -- how block count data may or may not have been
10 used and some interaction between BASH and BPE, but it
11 can't be much because the information that I have in front
12 of me from Dr. Jaeger is -- is nothing. He uses bad data,
13 and he says, I didn't try to get good data and I didn't
14 try to get good information.

15 And I think both parties are acknowledging that
16 BASH informs BPE to some degree, and the question would be
17 how much. And I think you can cross-examine with respect
18 to how much BPE and BASH interact and including in 2016.
19 But I will say that I'm not sure they opened the door
20 entirely to the book of wisdom, but I'll let you talk
21 about -- or ask about this specific slide and the
22 interaction of BPE and BASH, but no numbers and no
23 foundational assumption in the cross that suggests any
24 kind of significant number because I think all of these,
25 based on what Dr. Jaeger testified to, are totally

1 unreliable. I found in my motion or in my *Daubert*, I
2 can't remember which one, that they are unreliable. So
3 you can't use these numbers to cross. They're unreliable.
4 So you can't use any of them, the ones that are actual
5 data and the ones that are not because the implication of
6 the group is based on unreliable data and it's completely
7 prejudicial to Columbia that they don't have the years or
8 the actual data to prepare their expert with or to do any
9 kind of redirect. So that is my ruling.

10 MR. MORIN: Understood, Your Honor.

11 THE COURT: All right.

12 MR. MORIN: Sorry for taking the time.

13 THE COURT: No. That's fine. We have to make a
14 record.

15 Is that clear to everybody?

16 MR. GUZIOR: Yes. Thank you, Your Honor.

17 THE COURT: All right.

18 MR. MORIN: May I approach and get set up while
19 we call the jury in?

20 THE COURT: Of course.

21 MR. MORIN: Thank you.

22 THE COURT: You don't need me to leave the bench
23 to do that, do you?

24 MR. MORIN: No. No.

25 MR. GUZIOR: We'll get Dr. Cole back in.

1 THE COURT: Okay. Can we ask him not to come in
2 for just one second, while you're setting up?

3 MR. MORIN: Your Honor, may I put these at the
4 witness box? I don't want to overstep my boundaries.

5 THE COURT: Actually, can you do that, please,
6 Ms. Deskins?

7 MR. MORIN: Thank you. And we have two copies
8 for the Court. We'll do that as well. Thank you. That's
9 for the witness. Ms. Tull has the other two.

10 THE COURT: All right.

11 So the last thing I want to say is that with
12 respect to the book of wisdom, I think that the use for
13 cross-examination here would be somewhat contrary to the
14 fact that it is a backward looking doctrine, but that's
15 only part of the basis of my ruling.

16 MR. MORIN: I understand, Your Honor.

17 THE COURT: Okay. I just want that on the
18 record. Now we're ready.

19 (The jury entered the courtroom.)

20 THE COURT: Good afternoon. It's good to see
21 you all. We took a little extra time. Unfortunately, we
22 didn't give you more food because of that, but we're
23 taking care -- I swear all information that we're dealing
24 with is helping the presentation. Everybody is working
25 very hard, both sides. And so we are not trying to waste

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1 your time. Some things are just unpredictable in trial.

2 Okay?

3 All right. So we're ready for cross; is that
4 correct?

5 MR. MORIN: Yes, Your Honor. May I proceed?

6 THE COURT: Yes. I just want to remind
7 Dr. Cole, as I'm sure he knows, that you continue to be
8 under oath.

9 THE WITNESS: Yes, Your Honor.

10 MR. MORIN: Thank you, Your Honor.

11 And good afternoon, ladies and gentlemen of the
12 jury.

13 **CROSS-EXAMINATION**

14 BY MR. MORIN:

15 Q Good afternoon, Dr. Cole.

16 A Good afternoon.

17 Q My name is Mike Morin. We met briefly in the
18 hallway. You understand I'm the lawyer for Norton in this
19 case?

20 A Yes. That's my understanding.

21 Q And I heard you live in Northern Virginia in your
22 direct. I live not far from you, I think. Maybe we'll
23 have coffee when this whole thing is over.

24 A Hopefully we'll be on speaking terms.

25 Q Okay. I hope so too. My goal here is not to get in

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1 an argument with you. I just want to see if we can agree
2 on some foundational things as we go through your
3 testimony. Okay?

4 A Sounds great. Thank you.

5 Q Okay. And the first thing I wanted to get agreement
6 on, I interrupted you at one point in time when you were
7 giving your answers, and do you remember I objected on the
8 issue of whether we were going to call it an infringing
9 function, right? Do you remember that?

10 A Yes, I do.

11 Q Okay. And just so we're all clear here, you haven't
12 offered any opinions on whether or not the patents in this
13 case are infringed, correct?

14 A That is correct. I've offered no infringement
15 opinion.

16 Q All right. You've merely, for the sake of your
17 testimony here, assumed that the patents are infringed,
18 right?

19 A That is correct. For apportionment, I make the
20 assumption that the patents infringe.

21 Q And I just want to tell you, that's a fair thing to
22 do because your analysis, you're asked to assume that the
23 patents are infringed, but that's not actually your
24 opinion that they're infringed. You're agnostic on that,
25 right?

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1 A Correct. I did not form an opinion on infringement.
2 I'm just making that assumption.

3 Q So every time during your testimony that you said the
4 infringing products or the infringing functionalities,
5 that's shorthand. But would it be fair to say what you're
6 saying is the product that I've been asked to assume is
7 infringed but I don't know if it is. Is that fair?

8 A I did not form any opinion on infringement. So that
9 would be fair.

10 Q Okay. Good. I'm going to call it, if it's okay with
11 you, the accused functionality. Would that be all right?

12 A Yes, it would.

13 Q Okay. And you did multiple reports in this case. We
14 heard a little bit about that on your direct examination,
15 right?

16 A That is correct.

17 Q And you did a set of reports or one report in 2014
18 and then some additional reports in 2019, right?

19 A That is correct.

20 Q Okay. And just so you know what's in front of you,
21 my colleague has left you some binders. You have whatever
22 you had on direct examination, but we've left you three
23 things to refer to. The first is your report because I
24 want you to be able to refer to your reports whenever you
25 need to. Okay, sir?

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1 A Okay. Thank you.

2 Q The second thing we've left you is your deposition
3 transcript. There may be a time that we want to talk to
4 you about what you said in your deposition. Okay?

5 A Yes, I see that.

6 Q And then there's just a few demonstrative exhibits,
7 which are -- I'll remind the jury are not evidence. They
8 may be slides or graphs that we use to illustrate the
9 testimony. Fair enough?

10 A Yes, I see that also.

11 Q Okay. And in those reports, you set forth the
12 opinions that you're offering in the case. Is that fair?

13 A That is fair.

14 Q And you set forth the bases for those opinions in
15 your reports, right?

16 A That is correct.

17 Q And those reports are fairly extensive, fair to say?
18 You spent a long time on them?

19 A Yes, I did.

20 Q And would you agree that your conclusions are only as
21 strong as the evidence and assumptions that they are based
22 on? Is that fair?

23 A It would be based on the materials considered, the
24 deposition transcripts, and my expertise in the industry.

25 Q Okay. And one thing you said -- if we could look at

Eric Cole - Cross

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1 your 2019 report. If you'd like to turn to it, or you
2 could just look at it on the screen, if that's okay. Are
3 your eyes pretty good?

4 A They are pretty good.

5 Q My wife's an ophthalmologist in Northern Virginia.
6 So if you need eye help, we can help you out.

7 A Okay. Thank you.

8 Q Okay. And one thing that you said -- and if we could
9 pull up your 2019 report, and if we could go to
10 paragraph 80, one thing you said -- in the first sentence
11 you said, "Indeed, the approaches outlined above have been
12 widely adopted in modern security systems." Do you see
13 that?

14 A I do.

15 Q And those prior paragraphs you were talking about the
16 patented technology, this is a section on the patented
17 technology. Do you remember that?

18 A Could we pull that up quick just so I could
19 spot-check?

20 Q Absolutely.

21 MR. MORIN: Let's go to the prior page, if we
22 could, Mr. Schmoller.

23 BY MR. GUZIOR:

24 Q And let's turn to the top of that page. Do you see
25 the heading for this section is, "Columbia's patented

Eric Cole - Cross

1552

1 technology has been a key driver of demand for Symantec's
2 products"? Do you see that?

3 A I do see that.

4 Q And then I'll represent to you -- and we can look at
5 it if you'd like -- that the following several paragraphs
6 are about the patented technology?

7 THE COURT: Wait a minute. Where is that that
8 you just showed him?

9 MR. MORIN: Your Honor, it's in the 2019 report.

10 THE COURT: Right.

11 MR. MORIN: At page 23.

12 THE COURT: So you're going back to 23 from
13 page 39?

14 MR. MORIN: I didn't think it was page 39,
15 Your Honor. It was on page --

16 THE COURT: Didn't you say paragraph 80? Am I
17 in the wrong report? Oh, I'm in the reply.

18 MR. MORIN: Yes. I'm sorry, Your Honor.

19 THE COURT: No. No. No. This is why I ask the
20 questions. I want to make sure.

21 MR. MORIN: I think it's pages 23 and 24, for
22 the record, Your Honor.

23 THE COURT: I'm sorry.

24 MR. MORIN: No worries, Your Honor.

25 THE COURT: All right. All right. Now I'm with

Eric Cole - Cross

1553

1 you. Apologies.

2 MR. MORIN: Of course, Your Honor.

3 BY MR. MORIN:

4 Q Paragraphs 74 through 79 talk about the patented
5 technology. Do you see that?

6 A Yes, I do.

7 Q And then we'll go back to paragraph 80, and you say,
8 "Indeed, the approaches outlined above have been widely
9 adopted in modern security systems." You say that. Do
10 you see that?

11 A I do see that.

12 Q So you're saying the patented technology has been
13 widely adopted?

14 A Generally, that's what it looks like it's referring
15 to.

16 Q Right. And that assertion isn't true, is it, sir?

17 A I believe it is. I'd have to go back and check the
18 specific paragraphs, but I believe it's true.

19 Q Well, let's talk about that for a second. There are
20 many different companies who sell malware software, right?

21 A That is correct.

22 Q And you're an expert in this area, very impressive
23 credentials. I will represent that to you. You know the
24 market well, right?

25 A That is correct.

Eric Cole - Cross

1554

1 Q And you realize that Norton only has 15 to 20 percent
2 market share typically, right?

3 A It depends which years you're talking about, but
4 generally, that seems to be correct.

5 Q All right. And you have no idea whether any other
6 competitors have ever used the patented technology. True?

7 A That is correct.

8 Q And you actually -- we started with this at the
9 beginning. We don't know whether Norton uses the patented
10 technology, right?

11 A Correct. I did not opine on infringement.

12 Q So you say here that the patented technology has been
13 widely adopted. What we know, as far as we know, between
14 zero percent and at most, 20 percent of the market uses
15 it, right?

16 A I think to be clear, I think it's saying the
17 approaches, which is talking about some of the general
18 approaches in cybersecurity. I don't think it's referring
19 directly to the patents.

20 Q In that case, let's turn --

21 THE COURT: Wait. Wait. Wait. You just said
22 zero percent to 20 percent?

23 MR. MORIN: Correct.

24 THE COURT: Didn't he say that -- so you're
25 saying that because Norton is the only one that uses it,

Eric Cole - Cross

1555

1 perhaps?

2 MR. MORIN: Correct.

3 THE COURT: All right.

4 MR. MORIN: Yeah, because he doesn't know,
5 Your Honor, whether Norton use it. So it's between zero
6 and 20 percent of the market.

7 THE COURT: Got it.

8 BY MR. MORIN:

9 Q All right. So you were just making a point that
10 maybe you weren't referring to just the patented
11 technology here?

12 A Correct. This is just an introductory section that
13 I'm just talking about technology in general.

14 Q Okay. So let's look at your deposition transcript,
15 sir, at page 82, lines 1 through 13, and let's just see if
16 we can refresh your recollection on this.

17 MR. MORIN: If we could pull that up.

18 THE COURT: Are you entering this into evidence
19 or you're showing it to him?

20 MR. MORIN: So I'm going to impeach him with it,
21 Your Honor.

22 THE COURT: Okay.

23 MR. MORIN: Maybe we're in the wrong spot. I
24 need page 82, lines 1 through 13.

25 BY MR. MORIN:

Eric Cole - Cross

1556

1 Q And you were asked the following question, sir, and
2 gave the following answers. "But based on your experience
3 and general understanding of the field, you do offer the
4 opinion that approaches of the '115 and '322 patents have
5 been widely adopted in modern security systems, correct?"

6 MR. GUZIOR: Objection.

7 THE COURT: Yes.

8 MR. GUZIOR: He's not impeaching the witness.
9 There's nothing that's been said that's inconsistent.

10 THE COURT: Take it down. What's inconsistent?

11 MR. MORIN: That he was referring to the
12 patented technology when he said that it was not widely
13 adopted -- when he was saying it was widely, Your Honor.

14 THE COURT: I'm going to overrule the objection.

15 MR. MORIN: If we could put it back up, please.

16 BY MR. MORIN:

17 Q And you were offering the opinion of the approaches
18 of the '115 and '322 patents have been widely adopted in
19 modern security systems, and there's an objection. And
20 your answer is, "Yes."

21 Do you see that?

22 A Yes. But to be clear, it's asking about approaches
23 of the '115 and '322. It's not asking for an opinion on
24 infringement or specific use of each claim.

25 Q Okay. So we can agree, can we not, sir, that the

Eric Cole - Cross

1557

1 technology claimed in the '115 and '322 patent have not,
2 in fact, been widely adopted. Fair?

3 A That was not a task I was asked to perform. To me,
4 the general approaches that are in the '115 and '322, I
5 have seen some of those general approaches.

6 Q Okay. That's fine. We're talking the same language.
7 The general approaches may have been used, but your
8 apportionment needs to talk about the particular claims of
9 the patent, right?

10 A The apportionment is focused on the patented
11 technology and its value to the products.

12 Q And specifically the claims of the patent, right?

13 A Depending on which year or which report, the answer
14 could be different.

15 Q When you apportioned down to the number you got to,
16 were you talking about the patented technology generally
17 or were you apportioning to the claims of the patent?

18 A I was referring to the components that focus on the
19 combined model claims in the patents.

20 Q The claims of the patents, right?

21 A The combined model claims.

22 Q Right. And we can agree that there's no evidence
23 that the claims of the patent have been widely used. Is
24 that fair?

25 A That would be correct.

Eric Cole - Cross

1558

1 Q Okay. Then in your most recent report, your 2019
2 report, there's a large section of the report that relates
3 to demand for the patented technology. Do you remember
4 that?

5 A Generally the section. I don't remember the specific
6 paragraphs.

7 Q Okay.

8 MR. MORIN: So if we could pull that up on the
9 screen, Mr. Schmoller.

10 BY MR. MORIN:

11 Q It's actually 55 pages of your report.

12 MR. MORIN: Maybe we'll go to the table of
13 contents just to make sure we're on the same page. And if
14 we could blow that up.

15 BY MR. MORIN:

16 Q Do you see -- you start at page 23, and do you see
17 that section is entitled Section 3, "Columbia's patented
18 technology has been a key driver of demand for Symantec's
19 products." Do you see that?

20 A I do see that.

21 Q And then the first subsection under there, you divide
22 that into three periods of time in your report, right,
23 sir?

24 A If I could look at the next page to refresh, I
25 believe that is correct.

Eric Cole - Cross

1559

1 Q Let's start with this one, and we'll count them as we
2 go. Is that fair, sir?

3 A Yes, it is.

4 Q Okay. Okay. Section 3.1 deals with the first period
5 of time before 2009. Do you see that?

6 A Yes, I do.

7 Q And you talk about the period of demand between 2009
8 and -- between -- before 2009 up to 2009. Fair?

9 A Correct.

10 Q Okay. And if we go to the next page, we go to
11 Section 3.2, your second period of time that you talk
12 about is what you called the products differentiator time,
13 and that's between 2009 and 2015, correct?

14 A That is what's listed in the table of consents.

15 Q Right. And what you mean by a product differentiator
16 is it's something in Norton's product that allows it to
17 differentiate itself from other products?

18 A That is generally correct, at a high level.

19 Q Okay. And then the third period of time is
20 Section 3.3, and that's when you say it's part of the core
21 elements, the core features of the products, and that's
22 from 2016 to '19. Do you see that?

23 A Yes, I do.

24 Q So you break your demand analysis into three periods
25 of time, kind of pre-2009, 2009 to '15, and then 2016

Eric Cole - Cross

1560

1 onward, correct?

2 A That is correct.

3 Q Right. And that's about 55 pages of your report,

4 give or take?

5 A I did not calculate or remember that number.

6 Q That's fine. That's fine. It's a long report, but

7 I'll represent to you it's about 55 pages. Okay?

8 A Okay.

9 THE COURT: The part starts at 23 and ends at
10 55.

11 MR. MORIN: No, Your Honor, I don't mean to
12 correct you. The last section starts at page 55. Of
13 course, that section goes on until page 79.

14 THE COURT: Got it.

15 MR. MORIN: Thank you, Your Honor.

16 BY MR. MORIN:

17 Q Is that -- what we see now, it's about 50 pages?

18 A Give or take a few pages, that seems to be correct.

19 Q Okay. So I'd like to go back and focus you on that
20 first period of time, if we could, the period of time
21 before 2009, right?

22 A Okay.

23 Q And that's the period of time in which you say that
24 Norton's products without SONAR/BASH were inadequate to
25 satisfy consumer demand. Fair?

Eric Cole - Cross

1561

1 A Without the infringing version of SONAR/BASH.

2 Q Right. You say without it, couldn't satisfy consumer
3 demand, right?

4 A Generally, that's one of the opinions.

5 Q Okay. Now, you showed the jury earlier an Exhibit
6 PX-325.

7 MR. MORIN: And I'd like to go ahead and call up
8 the slide that you showed. What slide was that,
9 Mr. Schmoller? If we could put it up, that would be fine.

10 Okay. Actually, let's use the exhibit that they
11 had.

12 A moment's indulgence, Your Honor. May I?

13 THE COURT: Of course.

14 MR. MORIN: Thank you.

15 THE COURT: You can take that one down if that's
16 not the one you're using.

17 MR. MORIN: Sure. It's going to be the same
18 document, Your Honor, but in his slide, if that's okay.

19 THE COURT: Sure.

20 MR. MORIN: If we could put up slide 19.

21 BY MR. MORIN:

22 Q I'd like to show you a slide you showed to the jury.
23 And what you talked about here, sir -- and now we're
24 talking about, to reorient ourselves, your period one
25 before 2009. Okay? Are you with me?

Eric Cole - Cross

1562

1 A Yes, I am.

2 Q Okay. And you showed the jury this slide -- you
3 didn't show the jury this slide. Your counsel displayed
4 the slide, correct?

5 A During my direct, correct.

6 Q Right. And at the beginning of your direct, you
7 testified that these are your slides, that you had created
8 them. It's fine if it's with the assistance of someone,
9 but you created them, right?

10 A That is correct.

11 Q Okay. And if I say by accident, just so we're all
12 clear, you put up a slide, we understand your counsel put
13 it up, but these are your slides. You take ownership,
14 right?

15 A That is correct.

16 Q Okay. And in this slide, you thing you focused on
17 was in the middle, and you talked about how McAfee's
18 consumer segment grew 20 percent year over year versus
19 Symantec at 2 percent, right?

20 A Yes, that's what the slide says.

21 Q Right. What you didn't talk about -- you weren't
22 asked, to be fair -- were the actual numbers, right?

23 A That is correct.

24 Q So let's talk about the actual numbers about the
25 period of time that you say they couldn't satisfy demand.

Eric Cole - Cross

1563

1 And these are in millions. So you see that in 2005,
2 Symantec sold \$1.4 billion worth of product. Then it went
3 up to 1.55, 1.7 and then 1.836. Do you see that?

4 A Yes, I do.

5 Q All right. So between -- in the period of time that
6 you said Symantec's falling behind, between 2005 and 2008
7 without the accused functionality, sales had gone up by
8 more than \$400 million. Is that true?

9 A Yes, but that's expected because you do raise your
10 price each year. So if you're losing market segment,
11 which the slide clearly shows they are losing market
12 segment and they're not growing as fast, you would still
13 expect to see some increase in revenue from the increase
14 of the price each year.

15 Q My question, sir, was simply have the sales in the
16 period of time where you said they weren't able to meet
17 demand gone up by more than \$400 million? Is that a true
18 statement?

19 A That does appear to be true.

20 Q Right. Whereas I know in percentages it's different.
21 But it's more than the amount that everyone else combined
22 has gone up in absolute dollars?

23 A But it's going to be proportional based on percent
24 increase.

25 Q Sir, my question is only that the sales volume, in

Eric Cole - Cross

1564

1 terms of dollars, for Symantec, without the accused
2 product, had gone up more than the entire rest of the
3 market combined. True?

4 A That would be true because they have a larger market
5 share, but the percent is still smaller.

6 Q And what you don't know, sir, is whether the addition
7 of the accused functionality improved Norton's revenue
8 after that. You don't know one way or another, correct?

9 A Not revenue specifically, but I do have documents to
10 show that it was a key game changer within Norton.

11 Q I understand that you've shown some documents here
12 that say SONAR/BASH was good, a game changer, whatever you
13 want to talk about.

14 My question, sir, is you don't know whether
15 adding that functionality actually translated into
16 additional sales? You don't know one way or another.
17 True?

18 A That was not something I was asked to directly opine
19 on.

20 Q So the answer is you don't know?

21 A That is correct.

22 Q Okay. And one of the main reasons you said that
23 Norton needed the Columbia technology was because
24 competitors had stepped up their games. Fair?

25 A I believe I said something similar to that.

Eric Cole - Cross

1565

1 Q Now, by 2006 -- you know this because you worked at
2 McAfee -- McAfee had a product that protected against
3 zero-day exploits, right?

4 A It did. Just to be accurate for the record, you said
5 2006?

6 Q Correct.

7 A And that was not the years I was at McAfee.

8 Q Oh, I understand you came later, but you know from
9 opining in your report and from your history that by 2006,
10 they had software that prevented zero-day malware,
11 correct?

12 A They had software that had that claim. The working
13 and efficacy is always a little different than what the
14 products claim.

15 Q Right. And there's no reason for you to think that
16 McAfee used the technology at issue here, right?

17 A That was not something I was asked to opine on, and I
18 wasn't focused on infringement in this case at all.

19 Q Right. So the answer is you don't have any idea
20 whether they used the patented technology, right?

21 A Yeah. That was not something I was asked to opine
22 on.

23 Q So you don't know?

24 A Correct.

25 Q Okay. And you know that -- you showed the '115

Eric Cole - Cross

1566

1 patent. You know that that application published in May
2 of 2007 so the whole world could see it. You're aware of
3 that?

4 A I believe that date is correct. I'm trying to go
5 from memory, but that sounds to be about right.

6 Q We don't have to go from memory. I want to make sure
7 that we are all on the same page.

8 MR. MORIN: So why don't we put it up on the
9 screen, if we could, Mr. Schmoller.

10 BY MR. MORIN:

11 Q And we'll see that the publication of the patent was
12 in May of 2007. Do you see that there?

13 A Yes, I do. Thank you for sharing that.

14 Q Of course. And anytime you want to see anything, you
15 tell me, okay, and we'll pause and we'll find it for you.

16 Okay?

17 A Okay. Thank you.

18 Q Sure.

19 And so what we know is that the first patent in
20 suit didn't publish, you talked about this -- didn't issue
21 until December of 2011. Fair?

22 A That is correct.

23 Q So the information in the patent had published, the
24 whole world knew about the technology in 2007. We saw
25 that, right?

Eric Cole - Cross

1567

1 A Yes, we did.

2 Q And the first patent didn't issue until December of
3 2011, right?

4 A That is correct.

5 Q And that's a four-and-a-half-year period, about
6 right?

7 A Yes.

8 Q All right. So for those four and a half years, the
9 technology was known to everybody and they could have --
10 the whole world could have used it for free. Do you
11 understand that?

12 A That's not my general understanding of when a patent
13 issues, that you have the right to use it for free. It's
14 putting the public on notice that you filed a patent for
15 that technology. So I wouldn't agree with that statement.

16 Q My point is a little different.

17 A Okay.

18 Q From 2007, everyone knew about the technology, or at
19 least had access to it from the publication, right?

20 A It was public at that point.

21 Q And the patent at issue didn't issue until 2011,
22 right?

23 A That is correct.

24 Q And until a patent issued, you -- you talked about
25 patents in your direct a little bit. Until a patent

Eric Cole - Cross

1568

1 issues, everyone has the right to do it. You can't assert
2 a patent that hasn't issued. You're aware of that?

3 A I am aware of that. I would disagree with everyone
4 has a right to use it, but you can't assert it until it
5 issues.

6 Q Right. And so for those four and a half years, the
7 patent couldn't have been asserted against anybody. Do
8 you understand that?

9 A Once again, you're getting into the legal side,
10 which -- but that's my general understanding. But like I
11 said, when it comes to the law of patents, which is what
12 you're asking me, I'm going to defer to the attorneys for
13 that.

14 Q That's very fair. So let's just phrase it
15 differently, then. The technology was known and out there
16 as of 2007. We agreed on that?

17 A Yes, we did.

18 Q And the first patent that could be enforced that
19 we're aware of in this case didn't issue until December of
20 2011, right?

21 A That is also my understanding.

22 Q And so there's a four-and-a-half-year period that
23 people could use it without being sued for patent
24 infringement, right?

25 MR. GUZIOR: Your Honor, it's just a

Eric Cole - Cross

1569

1 misstatement of the law.

2 THE COURT: You can continue. Continue with
3 your objection.

4 MR. GUZIOR: So, Your Honor, I object on the
5 basis that he's asking this witness about the law and
6 misstating the law in the premise of the question. You
7 can go back with back damages six years after the patent
8 issues.

9 THE COURT: All right. So it is a misstatement
10 of the law. You said without being sued.

11 MR. MORIN: Correct.

12 THE COURT: So I guess that is okay. But the
13 problem is you're asking a legal question of a witness who
14 doesn't know that once it's issued, you can go back six
15 years.

16 MR. MORIN: But you -- I won't argue the law
17 here. We can take that up outside and not waste the
18 jury's time with it. I can move along and make my point.

19 THE COURT: All right.

20 MR. MORIN: Okay.

21 BY MR. MORIN:

22 Q My only point is as far as you're aware, nobody else
23 used the claim technology prior to the patent issuing in
24 2011. True, as far as you're aware?

25 A I was not asked to research that so I am not aware of

Eric Cole - Cross

1570

1 anyone because that was not a task I was asked to do.

2 Q Right. And you were, during some of that period of

3 time, at McAfee, during some of that period of time,

4 right?

5 A Yes.

6 Q Were you using Columbia's patented technology while

7 you were there?

8 A Not that I'm aware of.

9 Q Right. And you were at Lockheed Martin for part of

10 that time, right?

11 A Prior to McAfee, yes.

12 Q Right. And were you using Columbia's technology

13 there?

14 A Not that I am aware of.

15 Q Right. And was IBM or Intel or Kaspersky or

16 Trend Micro using that technology prior to the issuance of

17 the patent?

18 A I do not know that answer.

19 Q Okay. Do you know if anyone even approached Columbia

20 to say, hey, could we use the technology prior to -- in

21 your first period of time, prior to 2009?

22 A You're asking me about information from Columbia. I

23 don't know who did or didn't approach Columbia so I'm not

24 sure.

25 Q Well, you have 50 pages on demand for the patented

Eric Cole - Cross

1571

1 technology. We agreed on that. Fair, sir?

2 A Yes.

3 Q And Columbia hired you. You had access to talk to

4 whoever you wanted. Fair?

5 A Within the scope of my assessment of what I was

6 brought on to do.

7 Q One of which was demand for the technology?

8 A Was apportionment, in which understanding the demand

9 was a key component of that.

10 Q And when you're trying to figure out whether there

11 was demand for the patented technology, you have no idea

12 whether any single company on the planet went to Columbia

13 demanding or asking for the patented technology. True?

14 A I do not know that answer.

15 Q Okay. Let's go to the second period of time, sir,

16 which is your differentiation years. Do you remember

17 that? We talked about that.

18 A Yes, the second section.

19 Q That's between 2009 and '15, right?

20 A I believe that's correct, yes.

21 Q Would you -- do you need to be refreshed or do you

22 remember well enough? Either is fine.

23 A I do remember. That's fine.

24 Q Okay. And your point there was that Columbia's

25 technology from 2009 to '15 was a product differentiator,

Eric Cole - Cross

1572

1 right?

2 A That's correct.

3 Q And that's a feature that one product offers but

4 competing products lack, right?

5 A That is correct.

6 Q Okay. And you've spoken with Columbia's damages

7 expert in this case. You referred to him. Dr. Sullivan

8 in the back of the room?

9 A I've had some brief discussions with him with
10 attorneys.

11 Q Right. And you also said -- I thought it was
12 interesting in your direct, you said that you had worked
13 on at least 15 licensing agreements, right?

14 A That is correct.

15 MR. MORIN: And, jury, I apologize I keep
16 turning my back to you. I don't mean to be rude.

17 BY MR. MORIN:

18 Q When you said that you had -- let me reorient myself.
19 I realized I was looking at you and not including them.

20 You had done at least 15 licensing projects,
21 right?

22 A That is correct.

23 Q Okay. And you also discussed the hypothetical
24 negotiation in your direct examination, right?

25 A Yes, I did.

Eric Cole - Cross

1573

1 Q So you're familiar with what that is, right?

2 A Yes, I am, and I believe I explained it in the
3 direct.

4 Q Okay. Now, you understand that in this case the
5 hypothetical negotiation contemplates that the parties
6 would have negotiated what's called a nonexclusive
7 license. You're aware of that?

8 A That is my general understanding.

9 Q All right. And a nonexclusive license means that
10 Columbia could, after the license to Norton in our
11 hypothetical world, go out and license the same technology
12 to the competitors. You're aware of that?

13 A Once again, you're asking for legal terms. I'm
14 giving you my technical understanding, but I just want to
15 be clear for the record that I'm not a lawyer and can't
16 opine on legal terms.

17 Q I understand that. You introduced in direct that you
18 had done at least 15 licensing agreements, right?

19 A Yes, I have.

20 Q And you're aware generally that a nonexclusive
21 license means, like it sounds like, the patent holder can
22 license to other people as well. You're aware of that?

23 A Once again, not speaking on the law. But my general
24 understanding, working in the field, that is my
25 understanding.

Eric Cole - Cross

1574

1 Q All right. Whereas an exclusive license might mean I
2 license it to you and you're the only licensee. That's
3 what makes it exclusive. Do you understand that,
4 generally?

5 A Yes, and I've negotiated both types of licenses. So
6 yes.

7 Q Okay. Good. So the nonexclusive license means that
8 Columbia could license the patents afterwards to other
9 companies. You understand that?

10 A That is my understanding of the term, yes.

11 Q Okay. And Columbia could then, therefore, license
12 these patents after the nonexclusive license to McAfee and
13 to IBM and to Intel and anyone else it wanted. Do you
14 understand that?

15 A That's generally what the term nonexclusive means.

16 Q All right. And Mr. Herskowitz talked about this last
17 week. Did you hear or see his testimony?

18 A No, I did not.

19 Q So let me show a little to you and see if we can
20 agree on the same understanding.

21 MR. MORIN: If we could look at the trial
22 transcript, day 2, at page 455, please.

23 BY MR. MORIN:

24 Q If you need water at any time or anything, please.

25 A Okay. Thank you. I'm working on this, but I

Eric Cole - Cross

1575

1 appreciate it.

2 Q Okay. And this was Mr. Herskowitz's testimony to the
3 jury. I asked him, "Because a nonexclusive license allows
4 you to give a license to lots of different companies,
5 right?"

6 And his answer was, "Yes."

7 So that's consistent with what we saw, right?

8 THE COURT: He doesn't know what we saw.

9 MR. MORIN: Oh, let me rephrase the question.

10 BY MR. MORIN:

11 Q That's consistent with your understanding?

12 A Yes.

13 Q All right. And if we can pull up one more bit. I
14 want to see if this is consistent with your understanding.
15 And I asked Mr. Herskowitz, that someone can't rely on a
16 nonexclusive license as a part of differentiation from the
17 competitors because you can license it to them as well.
18 Do you see that?

19 A I do.

20 Q And you generally agree with that?

21 A Once again, just being careful as it's taking context
22 out of the whole transcript, but that one statement
23 generally is aligned with my understanding, without seeing
24 the rest of the transcript.

25 Q So just so we're on the same page, period two we

Eric Cole - Cross

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1 decided was our differentiation years. That's what we
2 decided it was called?

3 A I believe so.

4 Q And during the differentiation years, the license or
5 the damages that we're talking about in this case wouldn't
6 have allowed Norton to differentiate itself from its
7 competitors at all. True?

8 A If it was the nonexclusive.

9 Q Okay. And we'll talk to Dr. Sullivan about that
10 tomorrow. That's not your area, right?

11 A Sorry. Which area?

12 Q Whether it's exclusive or nonexclusive, you'd defer
13 to Dr. Sullivan, right?

14 A That is not something I opined on. I'm very careful
15 not to point to other experts. So I will just state
16 that's not something I was asked to opine on.

17 Q Okay. Now let's go to the third period of time in
18 your report for the demand years. Okay?

19 A Okay.

20 Q And that's from 2016 on, and you call those the core
21 feature years, right?

22 A I believe so, yes.

23 Q All right. And then by then, by the time we get to
24 2016, instead of being a product differentiator, you've
25 offered the opinion that this behavioral protection became

Eric Cole - Cross

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1 a feature that customers expected, right?

2 A I think I might have used the word core feature.

3 Q Right. And that core feature, you call it core in
4 that it's no longer a differentiator, it's a feature that
5 customers expect, correct?

6 A Right. Typically, when you release a new feature,
7 it's a differentiator. Some differentiators actually work
8 and become core features. Other differentiators don't
9 necessarily work and go away and don't get embedded into
10 the product.

11 Q All right. Fair enough. Let's look at your report
12 and just see if we're on the same page here. If we look
13 at your 2019 report, paragraph 152, please, sir. And then
14 if we look at the beginning of that paragraph?

15 MR. MORIN: Your Honor, I'll wait for you.
16 Whenever you're ready.

17 THE COURT: I'll get there. I think I'm there.

18 MR. MORIN: Of course.

19 We can do the whole sentence. I want to make
20 sure we have context, Mr. Schmoller.

21 Are you there, Your Honor?

22 THE COURT: I am.

23 MR. MORIN: Thank you, Your Honor.

24 BY MR. MORIN:

25 Q And what you said here about the core years is that,

Eric Cole - Cross

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1 "Rather than continuing to serve as a product
2 differentiator, behavioral protection became a feature
3 that certain customers expected and which Symantec
4 recognized was an important feature to maintain in its
5 products to avoid being placed at a competitive
6 disadvantage." Have I read that correctly? Please, take
7 your time.

8 A Yes, you did. I was just sort of anchoring with the
9 table of contents to give the context, but yes.

10 Q And, sir, you take whatever time you need. If you
11 need to look at anything else, you always just let me
12 know. Okay?

13 A I appreciate that. Thank you.

14 Q Okay. So the point here is that in our core years,
15 rather than our differentiation years, it had become kind
16 of an expected feature because all of the major companies
17 had it. Fair?

18 A I wouldn't say that. To me, a core feature is where
19 it could still go in and be a key component of
20 differentiating from the competition, but now instead of
21 being something new or unique, it's embedded into the core
22 product.

23 Q Right. We're past what you call the differentiation
24 years. We're in the core years, right? Fair?

25 A The core features and the key drivers of demand.

Eric Cole - Cross

1579

1 Q Right. And if we -- and that's because most
2 competitors had realtime behavioral detection by this
3 period of time. True?

4 A Some competitors had similar features during this
5 time period.

6 Q So is it fair to say, like you said in your report,
7 that most had by that period?

8 A I believe that would be correct.

9 Q Okay. And zero-day protection had also become a core
10 feature, right?

11 A That is also correct, yes.

12 Q All right. So let's take a look at your report,
13 please. If we go to your 2019 report to page 66.

14 MR. MORIN: And if Your Honor would let me know
15 when the Court's there.

16 Page 66, please.

17 BY MR. MORIN:

18 Q And let's put up the chart that you include. This is
19 your report. I want to make sure we all know where things
20 are coming from. This is your report, sir?

21 A Yes, it is.

22 MR. MORIN: Okay. And let's blow up across the
23 top what we're looking at, which is the different
24 companies.

25 BY MR. MORIN:

Eric Cole - Cross

1580

1 Q And do you see -- so that we line them up, I want to
2 make sure we're really clear on what we're doing here. So
3 that we can see the companies next to Realtime Behavior
4 Monitoring, I've taken the top legend, and I've also blown
5 up the line that says Realtime Behavior Monitoring. Do
6 you see that?

7 A Yes. And just for the record, I want to be clear
8 that we're talking the 2016 to '19 period, and the main
9 focus of my apportionment was the 2011 and '13 of the
10 hypothetical negotiations.

11 Q Totally understand that, sir. We're going to come
12 back to that, but this is your report, right?

13 A Yes. I just wanted to -- this is for context, but
14 the primary focus was on the dates of the hypothetical
15 negotiation.

16 Q We're going to spend a lot of time there, but, sir,
17 50 pages of your report talks about demand, and this is
18 from your report about one of those three periods. True?

19 A That is correct.

20 Q Okay. And the point here during the core years was
21 that -- and you included to -- you decided to include this
22 choice, right, that was your choice?

23 A Yes, it's my report.

24 Q Right. And across the top, we use Norton Security
25 with Backup, Norton Security, and then Kaspersky,

Eric Cole - Cross

1581

1 Trend Micro, McAfee, Webroot and AVG and BitDefender. Do
2 you see those across the top?

3 A Yes, I do.

4 Q And all of those companies had -- and you include
5 this in your report, had realtime behavioral monitoring,
6 right?

7 A Yes. In general, yes.

8 Q And as far as you're aware, other than possibly
9 Norton, none of these used the Columbia technology, as far
10 as you're aware, correct?

11 A That was not something I was asked to opine on. So I
12 would just leave it as I'm not sure.

13 Q You don't know one way or another?

14 A Yeah, that was not something I was asked to opine on.

15 Q And you were aware of no evidence that any of these
16 other companies use this functionality that you say is in
17 such high demand? You're aware of no evidence, right?

18 A It was not something I researched to see who else
19 utilized the patents.

20 Q All right. Let's step forward to your apportionment
21 analysis if that's okay, sir.

22 A Yes.

23 Q And I think we saw on the -- during your direct
24 examination, very thorough direct examination, you did
25 kind of -- is it fair to say three levels of

Eric Cole - Cross

1582

1 appportionment? Is that fair?

2 A Yes, it is.

3 Q All right. And so we're all on the same page,
4 level 1, you have a product and you're asking yourself
5 what percentage of the value of the overall product is
6 attributable to malware overall, correct?

7 A I think it would be the opposite, which is malware
8 detection, what is the value of malware detection added to
9 the overall product, what percent of the overall product
10 is contributed to malware detection.

11 Q You said it. That's what I was getting at. So we
12 have a product. What percentage of the value of that
13 product do you attribute to malware versus other things?

14 A Correct.

15 Q Okay. And then level 2, what we do is we go and we
16 say now we're at malware, but we all agree that the
17 patents don't cover all malware. What you do next is say
18 how much of that is the accused functionality, which I'll
19 shorthand as SONAR. Fair?

20 A That is correct.

21 Q And to make sure I understand your analysis
22 correctly, the third level that we do then is we say now
23 we're at SONAR. What percentage of the value of SONAR is
24 the patented features. Fair?

25 A That is step three.

Eric Cole - Cross

1583

1 Q Okay.

2 MR. MORIN: Moment's indulgence, Your Honor.

3 THE COURT: Of course.

4 MR. MORIN: If we could switch to the ELMO,
5 please. Thank you.

6 BY MR. MORIN:

7 Q Now, my -- my handwriting is terrible. My mom would
8 be literally very upset, but here we go. I want to track
9 what we're doing. Level 1, we'll call it malware. Fair
10 to refer to it that way? That will get you shorthand.

11 MR. MORIN: I'm not on the screen.

12 THE CLERK: Hang on. It should have autofocus.

13 MR. MORIN: Yep. There we go.

14 BY MR. MORIN:

15 Q Level 1, malware. Level 2 is SONAR, and level 3 is
16 patented technology. Fair? Reasonable shorthand.

17 A I tend to be more visual so I would refer back to my
18 slide with the boxes, but from looking at that, I believe
19 that represents what's on that graphic in my direct.

20 MR. MORIN: Okay. So we can take that down for
21 a minute.

22 BY MR. MORIN:

23 Q We're going to track as we go. Is that fair?

24 A Yes, that's fine.

25 Q All right. So let's start with the first step, which

Eric Cole - Cross

1584

1 is determining the value of the malware protection to
2 Norton's products, and you mentioned on direct examination
3 that you did two sets of reports, one in 2014 and the
4 second in 2019, right?

5 A That is correct.

6 Q I'm glad you mentioned it earlier. The hypothetical
7 negotiations in this case took place either in 2011 or
8 2013, correct?

9 A That is correct.

10 Q So we're all on the same page, your 2014 report came
11 after when the hypothetical negotiation would have been?

12 A That is correct.

13 Q Okay. And you did the same apportionment, meaning
14 the step, the level of apportionment, from the products to
15 the component that was malware value back in 2014 as well.
16 True?

17 A I did the same general steps, but I was given
18 different scope and direction in '14 than I was in '19.

19 Q By the lawyers?

20 A That is correct.

21 Q Okay. So Columbia had one set of lawyers, you're
22 saying, that gave you one set of instructions?

23 A In 2014.

24 Q Right. And then Columbia replaced the lawyers and
25 then the lawyers gave you a different set of instructions?

Eric Cole - Cross

1585

1 A Or a different assignment in 2019, that is correct.

2 Q But the overall step of taking the product and
3 bringing it down and apportioning the malware value, you
4 did that in 2014 as well. True?

5 A That is true.

6 Q Right. And you signed -- let's look at the front
7 page of that 2014 report.

8 MR. MORIN: If we could put it on the screen.

9 BY MR. MORIN:

10 Q You signed -- it wasn't the lawyers who signed that
11 report. You signed the report. Fair?

12 A Yes, I did.

13 Q Right. And you take ownership for that report,
14 representing your opinions, right?

15 A Yes. And it's clearly in the report the scope and
16 task that I was asked to do. So based on the limited task
17 in '14, I do stand behind that opinion.

18 Q Well, one of the tasks you were asked to do was
19 apportion the value of the accused functionality as part
20 of the overall product, right?

21 A But the task had a caveat that said I needed to use
22 Carey Nachenberg's number as the upper limit. So that was
23 the task that I started with, Carey Nachenberg's number as
24 the upper limit to do my apportionment.

25 Q Does that report say anywhere the lawyers directed me

Eric Cole - Cross

1586

1 to use Mr. Nachenberg's testimony as the upper limit?

2 A I do not believe that report has a legal section,
3 which normally they do that covers the various legal
4 assumptions. But under apportionment, it does say that
5 I'm using 70 percent as the upper limit.

6 Q Oh, we're on the same page there. We'll look at
7 that. But what it doesn't say is the lawyers or anyone
8 has instructed me to use 70 percent as the upper limit.
9 It doesn't say that. True?

10 A Like I said, I don't believe there's a legal section
11 that would normally cover that, but I'm telling you today
12 what the tasking was.

13 Q Right. But that's not what the report says, right?

14 A Like I said, I believe the report does say that I
15 used 70 percent as the upper limit.

16 Q Oh, we can agree on that. We'll look at that in a
17 moment.

18 But in that -- in that report, you relied on the
19 deposition testimony of Mr. -- I think it's Nachenberg,
20 Mr. Nachenberg, correct?

21 A Yeah. I apologize if I mispronounced his name, but I
22 believe we're referring to the same person.

23 Q I get the names wrong all the time. I was just
24 speaking common parlance.

25 A Okay.

Eric Cole - Cross

1587

1 Q I may have it wrong too. I haven't met the man.

2 But let's -- and he estimated that the
3 protection feature of -- in the Norton product was
4 70 percent of the value of the product and 60 percent for
5 the enterprise product, right?

6 A 70 percent for consumer and 60 percent for
7 enterprise.

8 Q Now, let's look at paragraph 36, if we could, of the
9 report, and we're in your 2014 report.

10 MR. MORIN: And I'd like to blow it up, please.

11 BY MR. MORIN:

12 Q And this is, again, a report you signed your name to,
13 sir?

14 A Yes, it is.

15 Q Okay. And let's look at what it says at the last
16 half of that sentence -- and I think this is important.

17 It doesn't say, I have been instructed. It says the
18 following, sir: "Accordingly, I generally agree with the
19 assessment of Symantec's witness who estimated that
20 malware detection contributes approximately 70 percent of
21 the value of Symantec's consumer products (the Norton line
22 of products) and approximately 60 percent of the value of
23 Symantec's enterprise products (Symantec Endpoint
24 Protection and Symantec Mail Security)."

25 So in that report, you say that you agree,

Eric Cole - Cross

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1 correct?

2 A Generally agree, but there are segments where I talk
3 about the 70 percent upper limit and I am telling you what
4 the assignment is, but yes, those words do say I generally
5 agree.

6 Q Right. So we're going to get to that section. I
7 know you keep mentioning it. We're going to get there,
8 sir. I promise we'll give you a chance to be heard.

9 But when we start on this section of the report,
10 you don't say, I've been instructed to adopt
11 Mr. Nachenberg. You say, I agree with Mr. Nachenberg,
12 correct?

13 A I generally agree. And like I said with today, my
14 average was 74. His was 70. So we're still within
15 4 percent.

16 Q We're going to get there also. Now, Mr. Nachenberg
17 mentioned, as you said on direct, that Mr. Nachenberg is a
18 fellow at Norton. You mentioned that, right?

19 A A senior fellow, I believe.

20 Q Right. That's the highest position -- engineering
21 position you can have at the company, right?

22 A Typically, a company as a senior fellow is the
23 highest technical position.

24 Q Have you been a senior fellow anywhere?

25 A Yes, I have.

Eric Cole - Cross

1589

1 Q Where was that?

2 A Lockheed Martin.

3 Q Right. That's a really prestigious position, right?

4 A At Lockheed, it was.

5 Q And the same at Norton for Mr. Nachenberg, right?

6 A That's my general understanding.

7 Q And you mentioned Norton's STAR division in your
8 direct a couple of times, right?

9 A Yes.

10 Q And that stands for Security Technology And Response,
11 right?

12 A That's one where some of the documents call it
13 Symantec Technology And Research, and some of the
14 documents call it Security Technology And Research. So
15 I'm not sure which S is correct.

16 Q That's an organization that you've talked about as
17 being an important organization in your direct
18 examination. Fair?

19 A My understanding is STAR is the division that's
20 responsible for those four detection components within the
21 antivirus product.

22 Q And Mr. Nachenberg, you're aware, was the chief
23 architect of all of STAR. You're aware of that?

24 A I believe he did have that title at one point, yes.

25 Q And I think maybe we can reach agreement that

Eric Cole - Cross

1590

1 Mr. Nachenberg knows his stuff and is pretty impressive.

2 Fair?

3 A I've never met the individual, but from what I've
4 seen in the documents and based on his titles, he does
5 appear to be a very knowledgeable person.

6 Q Right. And you mentioned Dr. Bailey's testimony
7 during your direct exam. Do you remember that?

8 A Yes, I did.

9 MR. MORIN: And maybe we could put up
10 Dr. Bailey's slide 60, please.

11 BY MR. MORIN:

12 Q And here we see Mr. Nachenberg there. He's a
13 Symantec fellow. That was from Dr. Bailey's slides,
14 right?

15 THE COURT: Does he know that?

16 MR. MORIN: He talked about Dr. Bailey's
17 testimony on direct. I can represent it instead,
18 Your Honor.

19 THE COURT: Yeah, he doesn't know Dr. Bailey's
20 slides.

21 MR. MORIN: Be happy to.

22 BY MR. MORIN:

23 Q I will represent to you that this was one of
24 Dr. Bailey's slides. You see that Mr. Nachenberg is on
25 there?

Eric Cole - Cross

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1 A I did. He seems to have disappeared, but I did see
2 that.

3 Q All right. And just so we're on the same page --

4 MR. MORIN: If we could put up slide 82.

5 BY MR. MORIN:

6 Q And we see that Dr. Bailey cited to Mr. Nachenberg
7 down there in this slide. Do you see that?

8 A Sorry. Where is this slide coming from?

9 Q I'll represent to you it's from Dr. Bailey.

10 A Oh, Dr. Bailey's direct?

11 Q Right.

12 A Okay.

13 Q And you'll see if we go to slide 157, he cites to
14 Mr. Nachenberg. Do you see that?

15 A Is the question just for me --

16 Q Do you see that?

17 A I do see that he sourced Nachenberg. I can't opine
18 on what is or is not in Bailey's presentation.

19 Q Absolutely not.

20 A Okay.

21 Q If we go to slide 136, do you just see that he cited
22 to Mr. Nachenberg?

23 A Once again, I see that on the slide. I do not know
24 these slides specifically.

25 Q And on slide 176, finally, do you see that Dr. Bailey

Eric Cole - Cross

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1 again relied on Mr. Nachenberg?

2 A I do see "Source Nachenberg" on the slide.

3 Q Now, here's the part that you were trying to get to.

4 In 2014, you used Mr. Nachenberg's number as your ceiling

5 as to what the highest amount of value would be. That's

6 the point you were making?

7 A Yes, it was.

8 Q Okay. Let's look at your report on that subject.

9 MR. MORIN: If we could pull up paragraph 121,
10 please, and put it on the screen.

11 BY MR. MORIN:

12 Q And, again, this is your 2014 report. Do you
13 understand that?

14 MR. MORIN: Go to paragraph 121, please.

15 BY MR. MORIN:

16 Q Are you there, sir?

17 A Yes, I am.

18 Q All right. And paragraph 121 in your report says,
19 "First, substantial evidence from Symantec's documents and
20 witnesses supports the allocation of up to 70 percent of
21 the value of the consumer products to malware detection."
22 Do you see that?

23 A Yes, I do.

24 Q And then if we go to the bullet points you used to
25 support that, the first bullet point talks about Symantec

Eric Cole - Cross

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1 designating Carey Nachenberg. Do you see that?

2 A I do see that.

3 Q And the next report in your reports talks about
4 Mr. Nachenberg elaborating on a presentation. Do you see
5 that?

6 A I do see those words.

7 Q And the third point talks about Mr. Nachenberg
8 confirming that no functionality is more important than
9 malicious intrusion functionality. Do you see that?

10 A I see that.

11 Q So just so we're clear, your report doesn't say the
12 lawyers have asked me to treat it as a ceiling. It
13 doesn't say the lawyers told me to allocate up to
14 70 percent. Your report says, "Substantial evidence
15 supports the allocation of up to 70 percent." That's what
16 the report says, correct?

17 A The report says, "From Symantec's documents and
18 witnesses."

19 As I mentioned, there's not a legal section in
20 the report, but I'm the author of the report, so I'm
21 telling you what direction I was given in writing that
22 report.

23 Q Okay. So just so we're on the same page, you're
24 telling all of us years later that you adjusted the
25 numbers up because of what the lawyers said, but can we

Eric Cole - Cross

1594

1 agree there's no indication of that in the report? Can we
2 agree on that?

3 A I do believe I indicate 70 percent is the upper
4 value, but there is not a legal section in the report
5 where I talk about the legal assumptions and what the
6 lawyers told me to do.

7 Q And I just -- I won't belabor the point. We'll move
8 along. Can we agree that anyone reading this report, when
9 you say -- and this is you talking, right? This is your
10 signature?

11 A Yes, it is.

12 Q You say, "Substantial evidence from the documents and
13 the witnesses supports the allocation of up to 70 percent
14 of the value." That it doesn't say, or remotely suggest,
15 you were asked by the lawyers to treat it as a cap. It
16 suggests and it says that it's your opinion. Fair?

17 A Just for the record, I believe you did leave out the
18 word "Symantec documents and witnesses," just so it's
19 correct.

20 But this section says up to 70 percent, but I
21 will agree that that section does not say what was the
22 task I was given from the attorneys.

23 Q All right. And so we're clear on the record, you
24 signed the report, and this is the opinion that you gave
25 at the time. True?

Eric Cole - Cross

1595

1 A Based on the assignment I was asked to do, yes.

2 Q Okay. Now, that means if 70 percent of the value was
3 due to malware detection, it meant that 30 percent was for
4 features other than malware protection. Fair?

5 A That would be the general basis.

6 Q All right. And by the way, what Mr. Nachenberg did
7 not say, that 70 percent of the value was due to malware
8 detection, did he?

9 A I would have to look back at his deposition. I think
10 it was a little more general.

11 Q Right. So let's take a look at that. You relied on
12 his deposition and cited it in both of your reports.
13 Fair?

14 A Correct.

15 Q All right. So let's take a look at his deposition
16 testimony.

17 A Would I be able to get an additional bottle of water?

18 Q Of course. Of course, sir.

19 MR. MORIN: May I approach, Your Honor?

20 THE COURT: No. My CSO will do it.

21 MR. MORIN: Okay.

22 THE COURT: Thank you.

23 MR. MORIN: Of course. We can take five, if
24 Your Honor would like. It's up to Your Honor.

25 THE COURT: Are you doing okay? Dr. Cole,

Eric Cole - Cross

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1 you're doing okay?

2 THE WITNESS: Yes, I'm doing good. Thank you,
3 Your Honor.

4 THE COURT: All right.

5 BY MR. MORIN:

6 Q Okay. I needed a break also so thank you.

7 Okay. Now, let's look at the testimony that
8 actually you put on the screen -- your lawyers put on the
9 screen, which was your slides. Okay?

10 MR. MORIN: May I have a moment, Your Honor?

11 THE COURT: Yes, you may. And actually, let's
12 just take -- we've been an hour. So we'll come back at
13 4:10.

14 MR. MORIN: Sorry, guys.

15 (The jury exited the courtroom.)

16 THE COURT: How much longer do you think you
17 have?

18 MR. MORIN: Forty-five minutes.

19 THE COURT: Okay.

20 MR. MORIN: Thank you, Your Honor. I'm sorry
21 for the interruption. I had a little frog in my throat.

22 THE COURT: No. That's okay. It happens. I
23 have my own Life Savers up here.

24 All right. So we'll take a recess until 4:10.

25 I'll remind you now and again, Dr. Cole, that

Eric Cole - Cross

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1 you're still under oath.

2 THE WITNESS: Yes, Your Honor.

3 THE COURT: And we'll see you back in just a few
4 minutes.

5 MR. MORIN: Thank you.

6 (Recess taken at 3:49 p.m.)

7 (The trial continues on the next page.)

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1 (The trial resumed at 4:11 p.m.)

2 THE COURT: Is there anything we need to
3 cover before we bring in the jury?

4 MR. MORIN: No, Your Honor, other than me
5 apologizing for calling for a break when my voice went
6 out.

7 THE COURT: No, that's fine. The jury was
8 ready.

9 MR. MORIN: Okay.

10 THE COURT: So we can bring them in.
11 Ms. Deskins.

12 MR. MORIN: Dr. Cole, have you got your
13 water?

14 THE WITNESS: Yes.

15 (The jury entered the courtroom.)

16 THE COURT: All right. Are we all ready to
17 go?

18 A JUROR: Yes.

19 THE COURT: Okay. Dr. Cole, you're still
20 under oath.

21 THE WITNESS: Yes. Thank you, Your Honor.

22 THE COURT: Thank you.

23 MR. MORIN: May I proceed, Your Honor?

24 THE COURT: Yes, please.

25 MR. MORIN: Thank you, Your Honor.

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1 BY MR. MORIN:

2 Q When we left off and when I had a frog in my
3 throat, we started talking about Mr. Nachenberg's
4 testimony about the 70 percent, right? Is that about
5 where we left off?

6 A That's my understanding, yes.

7 Q Okay. And I was just turning to where you had
8 displayed on the screen -- where your counsel had
9 displayed on the screen some of his testimony, and I'd
10 like to go to your Slide 58, sir. And we'll put it on
11 the screen for you. And this is a slide that you
12 talked about on direct examination; is that correct?

13 A Yes, it is.

14 Q And it actually doesn't say malware detection. It
15 says what percentages of the value that consumers get
16 from their products from you is attributed to
17 protection, and then you bolded the 70 percent. Do
18 you see that?

19 A Yes, I do.

20 Q And you are aware, sir, that that wasn't just
21 malware protection he was talking about, sir?

22 A My understanding is when he was talking about the
23 protection, that it was the malware protection
24 component.

25 Q All right. Let's go back to Mr. Nachenberg's

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1600

1 deposition transcript at page 210, lines 16 through

2 25. And you see that --

3 MR. MORIN: Maybe we can go up to line 16.

4 That's right, 16 to 25.

5 BY MR. MORIN:

6 Q And he was asked, "And you see that the first
7 category is virus protection. Do you see that, sir?"

8 His answer is, "Yes."

9 "Second category is firewall protection. Do you
10 see that, sir?"

11 His answer is, "Yes."

12 "Third category is spyware protection. Do you see
13 that, sir?"

14 And his answer is, "Yes."

15 "And the fourth one is phishing protection."

16 And I cut that off.

17 MR. MORIN: We should probably continue and
18 give him the answer, in fairness. Thank you,
19 Mr. Schmoller.

20 BY MR. MORIN:

21 Q And he says -- the answer is, "Yes."

22 Do you see all that, sir?

23 A I do see that Q and A, that one segment from his
24 transcript.

25 Q Okay.

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1601

1 MR. MORIN: And let's go to page 211, lines 1
2 through 17, please -- or I guess we should take 3
3 through 17.

4 BY MR. MORIN:

5 Q And then he was asked a question, "And all these
6 four categories involve what we would classically
7 describe as security, correct, sir?"

8 And he says, "Yes."

9 And he was asked a question by Columbia's counsel,
10 "There are ways of protecting against malicious
11 programs entering the computer system, correct, sir?"

12 And his answer is, "That is incorrect."

13 And the question is, "Why is that incorrect?"

14 And he says, "Virus protection and spyware
15 protection are, in part, focused on blocking malicious
16 software. Firewall protection and phishing protection
17 are focused on the network and, you know, web scanning
18 respectively so they're not focused on malware, you
19 know, files," so on.

20 Do you see that, sir?

21 A I do see that, and I think he's differentiating of
22 how the blocking was happening, whether it's coming in
23 over the network or a file on the computer system, but
24 both of those seem to imply that they're still
25 stopping malware either at a network or a file level.

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1602

1 Q Well, Mr. Nachenberg's testimony that both you and
2 Dr. Bailey have relied on, he says those aren't
3 focused on malware, correct?

4 A He said "malware, you know, files." So he's
5 referring to files on the computer instead of malware
6 coming in network packets.

7 Q And he actually says at the beginning of that
8 answer, "Virus protection and spyware protection" --
9 two of the four -- "are, in part, focused on blocking
10 malicious software." Then he says, "Firewall
11 protection and phishing protection are focused on the
12 network and, you know, web scanning respectfully."
13 That's his testimony, right?

14 A I believe what he's differentiating is if you
15 remember my animations where we talked about IPS or a
16 firewall where we had the guardhouse with the packets
17 coming in from the Internet, that's the network
18 traffic he's referring to. And when you have files on
19 a computer with the antivirus signature, he was
20 referring to that. But both of those are stopping
21 malware at different levels. He's just
22 differentiating between network blocking and file
23 blocking.

24 Q Okay. And you used his 70 percent number in that
25 first report. We talked about that, right?

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1603

1 A As the upper limit, correct.

2 Q And then your range ended up being 53 to
3 70 percent, right?

4 A For the consumer products, right.

5 Q And for the enterprise product, it was 60 percent.
6 So the overall range was 53 to 70 percent?

7 A Sorry. Are you mixing the two? I am not sure of
8 the question.

9 Q We can do it separately. The consumer product was
10 53 to 70, right?

11 A That is correct because we used 70 as the upper
12 limit.

13 Q Right. And the enterprise product was 60 percent,
14 right?

15 A Yes. Mr. Nachenberg, if I can pronounce it
16 correctly, Nachenberg said 60 percent for enterprise,
17 and because there was only a single product, based on
18 my direction for the 2014 report, 60 percent was that
19 value.

20 Q They told you what to allocate for the 2014
21 report?

22 A No, they didn't. The scope was -- in 2014, was
23 use Mr. Nachenberg's numbers as the upper limit and
24 allocate down. That was the assignment I was asked to
25 do in '14.

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1604

1 Q Sure. And just because the 60 percent is between
2 53 and 70, we can agree your numbers in 2014 were
3 between 53 and 70 percent, all of them, correct?

4 A For both products, now I understand, yes.

5 MR. MORIN: Can we go to the ELMO, please?

6 BY MR. MORIN:

7 Q 53 to 70 percent. Okay.

8 A Just for accuracy, could we put 2014 so -- because
9 the numbers are different in 2019.

10 Q Of course.

11 MR. MORIN: Actually, I've messed up. Can I
12 get a new piece of paper? A moment's indulgence, Your
13 Honor.

14 BY MR. MORIN:

15 Q I should have looked at my notes. I think you are
16 exactly right. Apologize for making you wait.

17 Okay. And you raise a good point. We'll wait and
18 put 2014 down. Let's do 2019, if we can. While we
19 have this up, can we agree that your numbers for 2019
20 were all between 60 and 95 percent? Is that fair?

21 A Yes. It was 60 to 95 percent for consumer, and
22 enterprise was 75. So it would also be within that
23 range.

24 Q All right. So that would be current position, 60
25 to 95 percent. That's your testimony now, correct?

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1605

1 THE COURT: I am going to ask you not to ask
2 questions when you're away from the microphone,
3 please.

4 BY MR. MORIN:

5 Q That accurately represents your current opinion,
6 correct?

7 A With my assignment in 2019 to look at the new
8 evidence and not have any constraints and just do a
9 full analysis of the allocation, that would be
10 correct.

11 Q The first set of lawyers, you were at 53 to 70.
12 With the second set of lawyers, you were from 60 to
13 95, true?

14 A With the caveat, for the record, I was given two
15 different assignments. So the assignments were
16 different. And also, the evidence was slightly
17 different between '14 and '19. So there are two
18 variables that would cause the change.

19 Q Okay. So your 2014 report had 70 percent of the
20 value of the Norton AntiVirus product as malware,
21 correct?

22 A So can you repeat the question?

23 Q Your 2014 report allocated 70 percent --

24 MR. MORIN: We can take that down, please.

25 BY MR. MORIN:

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1606

1 Q -- allocated 70 percent of the value of the basic
2 Norton AntiVirus product to malware, correct?

3 A In 2014, I was asked to use Mr. Nachenberg's
4 number, 70 percent for consumer as the upper limit.
5 So I started at 70, not 100.

6 Q Okay. But you applied, in your apportionment,
7 70 percent to the Norton AntiVirus product in 2014,
8 fair?

9 A That is correct.

10 Q Okay. Then we get to 2019 and the new lawyers,
11 and the number all of a sudden was 90 percent, right?
12 That's what your new number is for Norton AntiVirus?

13 A With the different assignments of 2014, I started
14 at 70 percent. And in 2019, there was no constraints
15 so I was asked to start at 100 percent.

16 Q Okay. But just so we are all following along,
17 2014 report, 70 percent of the value of Norton
18 AntiVirus was malware. 2019 report concludes
19 90 percent, true?

20 A Once again, for the record, two different
21 assignments and tasks. 2014, I started at 70, and
22 2019, I started at 100.

23 Q Okay. How about I spot you the following so we
24 are all on the same page? We know that you're going
25 to tell us they were different assignments. Let's

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1607

1 just talk about the numbers for a minute. I will tell
2 you, we all understand that's your testimony.

3 Can we just get to the point that in 2014 the
4 number is 70 percent, in 2019, the number is
5 90 percent? True?

6 A The numbers are different because the assignment
7 was different in those two cases.

8 Q Right. And when you go from 70 percent to
9 90 percent, you are saying that the value of all of
10 the other components is cut in a third; it goes from
11 30 percent to 10 percent. The math is right?

12 A That would be correct, the allocation, because
13 we're starting at a different point and remembering
14 that the primary feature of why somebody is buying
15 these products is malware detection.

16 Q Okay. And we talked about -- earlier we agreed
17 that in 2014 you treated Mr. Nachenberg's numbers as a
18 ceiling, right?

19 A That is correct.

20 Q And then 2019 comes along and you treated them as
21 a floor, correct?

22 A That's not correct because my numbers were 60 to
23 95 percent. So if I treated Mr. Nachenberg's numbers
24 as a floor, then my range would have stopped at 70.

25 Q All right. You treated Mr. Nachenberg's numbers

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1608

1 of 70 percent as a floor as it relates to the Norton
2 AntiVirus product, true?

3 A I'm not understanding the question.

4 Q Let's put up your report, then.

5 MR. MORIN: If we could go to the 2019 report
6 to paragraph 47. And if we could throw that on the
7 screen, please. And we're going to pages -- we're
8 going to paragraph 47, please. Paragraph 47 of the
9 2019 report, Mr. Schmoller.

10 THE COURT: What paragraph are you saying?
11 I'm sorry.

12 MR. MORIN: 47 of the 2019 report. We're
13 getting it up, Your Honor.

14 If we could bring up the beginning of the next
15 page to make sure we're complete for the jury and for
16 the witness.

17 BY MR. MORIN:

18 Q Let's read what you said in 2019 about
19 Mr. Nachenberg. You said, "Symantec's own witness
20 estimated that malware protection contributed
21 approximately 70 percent of the value of Symantec's
22 customer products (the Norton line of products) and
23 approximately 60 percent of the value of Symantec's
24 enterprise products." And then -- do you see that
25 part? It's on your screen as well, sir.

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1609

1 A Yes, I do.

2 Q Okay. So before, in your 2014 report, you said it
3 was the ceiling. And then you say, "Figures that
4 having been admitted by Symantec's witness, I consider
5 it appropriate to treat as a floor in assessing the
6 value of Symantec's products attributable to malware
7 detection," right?

8 A But it says, "As discussed below." So it's used
9 more as, like we did in that summary graph, as sort of
10 a sanity check of those numbers.

11 Q I understand, but am I reading this correctly that
12 because Symantec's witness, which is -- Mr. Nachenberg
13 testified to that, you say, "Having been admitted by
14 Symantec's witness, I consider it appropriate to treat
15 as a floor in assessing the value of Symantec's
16 products." Do you see that?

17 A That is there. But if you read the rest of the
18 report, it puts that in context of what I was
19 referring to.

20 Q I understand, but I just want to make sure that we
21 can agree together. In 2014, you were asked to do a
22 report, and you signed it, and you used Nachenberg's
23 number, and you said it was a ceiling, and now in the
24 2019 report -- you used the same testimony -- you say
25 it's a floor, correct?

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1610

1 A That's what that sentence says, but as I said, if
2 you read the whole report, it puts it in context.

3 Q I'm pretty sure we don't want to read the whole
4 report, but that's what that sentence says at least,
5 right?

6 A The one sentence out of context does say that.

7 Q Okay. And it's interesting you say that. You say
8 it's a floor because it was admitted by Symantec's
9 witness. Do you see that?

10 A I do see that.

11 Q So you decided that it's a floor, it says here in
12 the sentence, because it was Symantec's witness who
13 said it. That's what you say here?

14 A That's what that sentence says.

15 Q And he was a Symantec employee when you wrote your
16 2014 report. That hadn't changed, right?

17 A Once again, the assignment was different between
18 the two years, and I think that's a very critical
19 difference in the numbers.

20 Q Just to be clear, when you treated it earlier as a
21 ceiling, when you wrote that report, he was a Symantec
22 employee, right?

23 A That is correct.

24 Q And when you wrote this one, he was the same,
25 still a Symantec employee, right?

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1611

1 A That is correct, but the assignments were
2 different between the two reports.

3 Q I understand. But in this report, you say it's a
4 floor because it was Symantec's witness. That's what
5 you say right there. We just agreed on that?

6 A Yes, that's what it says.

7 Q Do you understand that Mr. Nachenberg testified
8 under oath in his deposition?

9 A That is my understanding, yes.

10 Q Do you know the man?

11 A No, I do not.

12 Q All right. Do you understand that the Court has
13 instructed the jury that they are the sole judges of a
14 witness's credibility? It's not your decision, it's
15 the jury's. Are you aware of that?

16 A I haven't seen the specific jury instructions, but
17 having done this before, that's my general
18 understanding.

19 Q The jury saw Mr. Nachenberg's testimony earlier
20 today and they can decide to credit it or not. Do you
21 understand that?

22 A Once again, you're asking me for legal --

23 THE COURT: You know, you really are.

24 Just -- he doesn't know what I instructed the jury.

25 He wasn't there.

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1612

1 MR. MORIN: I could put it up, Your Honor, if
2 you'd like.

3 THE COURT: Go ahead and put it up.

4 MR. MORIN: Okay. If we could call out
5 page 43, lines 17 through 20.

6 BY MR. MORIN:

7 Q And it says here, "Now, judging a witness's
8 credibility, you are the sole judges of each witness's
9 credibility. In deciding the facts, you may have to
10 decide which testimony to believe and which testimony
11 not to believe." You understand that's the jury's
12 role, correct?

13 A Sorry. I don't know what this document is. You
14 just -- I didn't see a title page or anything related
15 to it. So I'm not sure what this is you're showing
16 me.

17 Q Okay. I will represent to you and then move on,
18 but that was the instructions that the Court gave to
19 the jury at the beginning of this case.

20 A If you attest to that. Like I said, you're
21 throwing up page 43 out of context.

22 Q Okay. Now, we talked about the fact that by going
23 from 70 percent to 90 percent, you changed the
24 allocation for the other components of Norton
25 AntiVirus from 30 percent to 10 percent. The math

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1613

1 works, right?

2 A I believe that is correct, yes.

3 Q Okay. So let's go to a demonstrative and look at
4 some of the features that are in a Norton AntiVirus.

5 MR. MORIN: If we could put that on the
6 screen.

7 BY MR. MORIN:

8 Q So here's Norton AntiVirus. And you talked about
9 malware detection.

10 MR. MORIN: Let's see that.

11 BY MR. MORIN:

12 Q Now, malware detection I have in blue, and let me
13 make sure I have this straight. If we go to the next
14 clip, we have -- you gave 90 percent of the value of
15 the product to malware protection and 10 percent to
16 the collection of Norton community watch, the product
17 downloads and installations, the free support, like if
18 you call or you email, all the stuff Norton has to do,
19 the live threat monitoring, the antiphishing, the
20 identity safe, the network mapping and monitoring,
21 Norton Pulse, insight and optimized file copy,
22 built-in intelligence, Norton Management, Norton Power
23 Eraser, and Norton Bootable Recovery Tool. I just
24 want to make sure we're clear. You gave 90 percent to
25 malware protection and 10 percent to all the rest

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1614

1 combined, true?

2 A I gave 10 percent to all the other features. I
3 don't know if all of these features are actually
4 Norton AntiVirus, but I did give 10 percent to the
5 other non-malware. But I believe a few of these might
6 not actually be a Norton AntiVirus.

7 THE COURT: Let me just ask a question. What
8 are we looking at again here?

9 MR. MORIN: It's a demonstrative exhibit,
10 Your Honor.

11 Jury, I should tell you, this is not
12 evidence. This is based on other documents, but this
13 document --

14 THE COURT: You know what. I'll instruct
15 them on jury --

16 MR. MORIN: Oh, I thought we were supposed to
17 instruct, Your Honor, and tell them.

18 THE COURT: You've told them that.

19 I think you all know demonstrative exhibits
20 are not evidence. So they are created by each party
21 to demonstrate something.

22 MR. MORIN: Thank you, Your Honor. I didn't
23 mean to step in your role. I think in the pretrial
24 order it asked us to do that, and I had neglected to
25 do that, Your Honor.

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1615

1 THE COURT: All right. That is fine.

2 BY MR. MORIN:

3 Q All right. So let's talk more about the basic
4 Norton AntiVirus product. It sold for about \$40; is
5 that correct?

6 MR. MORIN: We can pull that down.

7 BY MR. MORIN:

8 Q Is that about right?

9 A I have to check the price. I think it was a
10 range. I don't have every price memorized.

11 Q You're actually right. It goes up by 10 bucks.
12 Let's look at your report at page 110, 2019 report.
13 And let's look at NAV -- NAV is Norton AntiVirus,
14 correct?

15 A That is correct.

16 Q And we see that in 2010, '11 and '12, it is \$40.
17 33.99. Do you see that?

18 A Yes, I do.

19 Q And by the way, we may get a little confused
20 sometimes. The accused functionality was added in
21 2009, right?

22 A Into consumer, yes.

23 Q At the consumer level, right. On Norton
24 AntiVirus, it was added in 2009, correct?

25 A NAV, or Norton AntiVirus, is a consumer product.

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1616

1 So it was added in 2009.

2 Q All right. Sometimes it will say year 2010. You
3 understand it's a little like cars. At the end of
4 2009, it may be the 2010 version?

5 A So I apologize. I don't follow the question.

6 Q You start here with your 2010, but that's actually
7 the version of Norton AntiVirus that was released in
8 2009. Do you understand that, in late 2009?

9 A Yes, that's my understanding. Thank you for
10 clarifying.

11 Q I was just making the point so we don't get too
12 confused that if you buy a -- if this year you might
13 be able to buy a 2023 Chevy in summer or fall of 2022.
14 That's the point here.

15 A That's my general understanding.

16 Q Okay. And -- but Norton AntiVirus had been sold
17 for many years before the accused functionality was
18 added, right?

19 A I believe so. Why I was pausing is I know they
20 changed product names so I am trying to figure out
21 when they changed the product names, but Norton did
22 have solutions prior to adding in the infringing
23 technology.

24 Q So if you turn in your binder to what's been
25 marked for identification purposes as DX-EB, we have a

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1617

1 screenshot just to look at a price point from the
2 Wayback Machine. You relied, by the way, in your
3 report sometimes on the Wayback Machine, right?

4 A Yes, I did. And for the jury, the Wayback Machine
5 is basically a recording mechanism of the internet so
6 you can go back to 2010 or 2009 and search on names,
7 and it will show you what the content of websites were
8 during that time period.

9 Q That was going to be my next question. Thank you,
10 sir.

11 And if we look at what the price point was in
12 2007, we'll see that it was 39.99. Do you see that?
13 Or 2008, I should say. Do you see it's 39.99?

14 A Yeah, it looks like this was captured in 2007, but
15 it is talking about Norton Internet Security 2008,
16 which is what I meant by the name changes.

17 Q Right. So it's our car example. It was captured
18 in 2007, but the model is 2008, but what's important
19 is you see that the price in 2007 was 39.99. Do you
20 see that?

21 A I do see that.

22 Q All right. Let's go to what's been marked for
23 identification purposes as DX-EC. And if we look at
24 the price of that product on October 5, 2008, we'll
25 see that the price, if you just confirm that I'm

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1618

1 reading this correctly -- no, wrong product. We'll

2 talk about that one -- was 39.99. Do you see that?

3 A Yes, I do.

4 Q All right. Let's go back to your report, then, at

5 page 111 and look at what it costs in the years 2010,

6 '11, and '12. And in 2010, '11, and '12, the price

7 was 39.99, right?

8 A That is correct.

9 Q And then it goes up 10 bucks in 2013 and '14,

10 right?

11 A That is also correct.

12 Q Okay. So let's put this on a graph what we've

13 just seen. This is a demonstrative, just a graph of

14 what we've seen. If we could put that on the screen.

15 So what we know is the Norton AntiVirus product

16 was \$40 for years before the accused functionality was

17 added. And then this what you call game changer

18 functionality was added, and the price of the product

19 didn't increase by a dollar for a few more years,

20 right?

21 A That is correct.

22 Q Okay. And then it finally goes up 10 bucks in

23 2012, but that was a different year. It's two years

24 from when the accused functionality was added,

25 correct?

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1619

1 A That's correct. And that would be typical of what
2 I would expect to see because if you have a product
3 that you're selling, but it's not working very well
4 and customers are getting frustrated and then you add
5 new technology to solve that, you're typically not
6 going to raise the price. You want to keep the
7 price the same to win back the customer confidence, to
8 win back the customer's opinion that your product
9 works, and then over time you would eventually raise
10 the price. So this is exactly what I would expect
11 with adding new technology.

12 Q My only question, sir, and then we'll explore
13 that, my question was: When they added the -- this
14 technology, they didn't increase the price by a penny
15 was my only question, correct?

16 A That's correct. And like I said, that's what I
17 would expect.

18 Q Okay. And you said they needed to win back the
19 customers, but we saw earlier that the sales had gone
20 up by \$400 million in the years leading to this. We
21 saw that, correct?

22 A The revenue increased but not necessarily sales.
23 We saw data that showed that the sales were down
24 considerably.

25 Q Revenue increased by \$400 million. They add the

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1620

1 accused functionality, and they don't increase the
2 price by a penny. Is that a fair statement?

3 A For the reason I just explained, yes.

4 Q Okay. Now, at the 90 percent apportionment
5 rate -- we can take that down -- for a 40-dollar
6 Norton AntiVirus product, the amount that you
7 attribute to malware detection is \$36 and everything
8 else is \$4, right?

9 A That sounds about right. I don't have a
10 calculator. And don't tell my kids that I'm not doing
11 math on the fly. But those numbers sound about right,
12 but I didn't calculate that.

13 Q 10 percent of \$40 is \$4.

14 A Fair enough. If we look at it that way, yes.

15 Q So \$36 for the malware, 4 bucks for everything
16 else, fair?

17 A Yes, it is. And now you really can't tell my kids
18 I didn't get that math correct.

19 Q I won't tell a soul. Okay.

20 But Norton AntiVirus, for years, was Norton's most
21 basic product for years, right?

22 A Yes, it was.

23 Q And they also had more expensive products with
24 more features, right?

25 A Yes, they did.

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1621

1 Q And you talked about those in your report and, in
2 fact, on direct, right?

3 A On direct, we showed, I believe, three products
4 from 2010 to '14, but we didn't show all the products,
5 but it is in my report.

6 Q And one of the products was Norton 360, right?

7 A Yes, that was one of the products.

8 Q So why don't we look in your binder to what's been
9 marked for identification purposes as DX-EC. And this
10 is an October 5, 2008, screenshot to look at the
11 pricing. And if we look at Norton 360 -- actually,
12 it's Norton Internet Security. If we look at Norton
13 Internet Security, the middle one -- thank you,
14 Ms. Tull -- we see that in October of 2008, and that's
15 before the accused functionality was added, it was 70
16 bucks, right?

17 A Just to be clear, you were earlier saying Norton
18 360, but now you switched. I just want to make sure
19 we're on the right --

20 Q I did. I made a mistake, sir. I apologize.

21 A So it is Norton Internet Security.

22 Q That's what I'm referring to, sir.

23 A Okay. And that is 69.99.

24 Q Okay. So that's before the accused functionality
25 was added. It was 70 bucks?

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1622

1 A That is correct.

2 Q All right. Now, let's go back to your report, and
3 if we can go to your report at page 111. And let's
4 look at the price of Norton Internet Security when --
5 it's in the middle -- when the accused functionality
6 was added.

7 THE COURT: Can we confirm which report we're
8 referring to?

9 MR. MORIN: Of course, Your Honor. The 2019
10 report. I will generally call out when I go to 2014,
11 but I should be more precise for the record. It's the
12 2019 report.

13 BY MR. MORIN:

14 Q And if we look at the price of Norton Internet
15 Security in 2010, it's now 60 bucks. Do you see that?

16 A Yes, I do.

17 Q Okay. So what's happened is the product cost \$70,
18 and then the accused functionality was added, and it
19 actually dropped by \$10 in price, correct?

20 A That is correct, which, once again, would be
21 expected if a product wasn't working and you were
22 losing customers. Even with new features, you would
23 drop the price to be able to regain those customers.

24 Q So they add the accused functionality, the price
25 comes down, fair? True?

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1623

1 A That's what happened, yes, and that's logical to
2 how the industry works.

3 Q Now, we talked about on a 40-dollar product
4 malware detection was worth \$36, right?

5 A That's correct. That's the main reason why
6 they're purchasing the product.

7 Q And if you look at Norton 360, it includes the
8 same features but some additional features, and now
9 it's \$56 in value because you gave it 70 percent, not
10 \$36, correct?

11 A I didn't follow the question.

12 Q When you looked at Norton AntiVirus --

13 MR. MORIN: We're on the wrong part. It's
14 the 80-dollar part. Thank you, Mr. Schmoller.

15 BY MR. MORIN:

16 Q I just want to make sure we're on the same page.
17 Norton 360, you showed us earlier, and I think we can
18 agree, includes all of the components of Norton
19 AntiVirus plus more, right?

20 A That is correct.

21 Q Okay. And you said malware was worth 36 bucks on
22 Norton AntiVirus but for Norton 360, you gave it
23 70 percent of the value, right?

24 A That is correct.

25 Q And 70 times \$80 is -- all of a sudden the malware

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1624

1 was worth \$56, right?

2 A That is correct.

3 Q So the same malware detection went up \$20 in
4 value, correct?

5 A That is correct.

6 Q Okay. So the customer is getting the same thing
7 and paying \$20 more, right?

8 A Because, as we said earlier in my direct, when you
9 go in and add in new features, you typically do a
10 markup of 2.5 or higher. So you need to account for
11 that because the main reason why they're still buying
12 the product is malware detection. And we even saw
13 Mr. Nachenberg say that customers don't know the
14 difference. They just know they're buying Norton.

15 Q I think, sir, my only question was, now you're
16 saying customers are paying \$20 more for the exact
17 same functionality, true?

18 A Because the price increase, so, yes, that's part
19 of the price of doing markups.

20 Q And just so the record is clear, my question is
21 only that you say they're paying \$20 more for the
22 exact same functionality, correct?

23 A Yes. And I gave the explanation of why that's the
24 case.

25 Q Okay. Now, let's take a look at what comes in

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1625

1 Norton 360, sir. And we'll go to a demonstrative
2 showing some of the features. Now, we already started
3 with Norton AntiVirus. Do you remember that?

4 A Yeah. Just for the record, these are your
5 demonstratives, not mine.

6 Q Absolutely. These are my demonstratives that our
7 team put together. I absolutely agree. And then
8 let's look at what you get on the demonstrative with
9 Norton Internet Security. When you upgrade there, you
10 get a number of additional things. Do you see that?

11 A Yes. And, once again, this is -- I have not seen
12 these demonstratives. So I'm not able to validate
13 whether the features are or are not correct.

14 Q But you studied apportionment. Nothing jumps off
15 the page as wrong to you on this, does it?

16 A Like I said, with Norton AntiVirus, I think a few
17 of those might not be correct, but I know there are
18 add-on features. But just for the record, I don't
19 have that memorized. So without verifying and
20 checking, I'm not confirming that this is accurate.

21 Q Okay. And you do know that a number of features
22 get added in Norton Internet Security, correct?

23 A That is correct.

24 Q And then you get even more features with Norton
25 360.

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1 MR. MORIN: If we could show that.

2 Q You're aware that you get more features with
3 Norton 360?

4 A Yes. Each one is called premium products because
5 they have additional features.

6 Q Okay. And if we look now, when you look at Norton
7 360, you say that malware protection is still
8 70 percent of the value of the overall product; is
9 that correct?

10 MR. MORIN: Can you show that?

11 BY MR. MORIN:

12 Q And everything else collectively gets 30 percent,
13 right?

14 A Well, I'm confused. What are we --

15 Q Your new number that you say for Norton 360 is
16 that the malware is 70 percent of the value and
17 everything else collectively is 30 percent, true?

18 A Yes, but that's not what this slide appears to be
19 showing. It still looks like it's putting it under
20 Norton AntiVirus.

21 Q What I'm trying to illustrate, and maybe I've made
22 a mistake with the slide, what we're trying to
23 illustrate is here is a lot of features that are in
24 Norton 360. You have given 70 percent to malware
25 protection and 30 percent to everything else

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1 collectively, true?

2 A For Norton 360, not Norton AntiVirus.

3 Q Correct. You're giving 70 percent for Norton 360
4 to malware, 30 percent to everything else
5 collectively, true?

6 A For Norton 360, yes. Like I said, this slide
7 doesn't seem to state that.

8 Q Now, one way you justified increasing the number
9 is that you basically say that your experience with
10 McAfee was that you are able to charge basically less
11 price-weary customers, the ones who bought the more
12 expensive product, more money for the same feature,
13 right?

14 THE COURT: So, I'm just going to put on the
15 record, the 70 percent and 30 percent were not under
16 Norton 360. Correct? They were under Norton
17 AntiVirus.

18 MR. MORIN: No, Your Honor. The 70 percent
19 -- and I think he can testify to that. He takes 70
20 percent of the value of Norton 360 and says that's
21 malware.

22 BY MR. MORIN:

23 Q Correct?

24 A That's not what the slide shows. That was my
25 whole point that I think Your Honor is making.

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1 THE COURT: I'm noting it differently. So
2 you can correct it. Can you put the slide back up?

3 MR. MORIN: Absolutely, Your Honor.

4 THE COURT: So I see that 30 percent under
5 Norton AntiVirus, not under Norton 360.

6 MR. MORIN: I could have been clearer on --
7 this is my fault. I could have moved the 30 percent
8 down. I am saying the 30 percent in yellow applies to
9 all the yellow boxes on the page, just to be clear.

10 BY MR. MORIN:

11 Q Do you understand that? I'm making that
12 correction.

13 A Right. But my point is that I think Your Honor is
14 also making is that's under Norton AntiVirus, not
15 under Norton 360, the 70 percent.

16 THE COURT: It's wrong as it is. You can put
17 it under Norton 360 and say it includes everything.
18 But the way it reads right now is that it's under
19 Norton AntiVirus only. That's how it reads.

20 MR. MORIN: The legend, the 70 and the 30
21 should be on the bottom of the page. Let me ask it
22 differently so we can all clarify it.

23 THE COURT: You said it's 30 percent under
24 Norton 360, right?

25 MR. MORIN: Correct.

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1 THE COURT: 70 percent malware. All of that
2 is under Norton 360.

3 MR. MORIN: Right. I have changed the --
4 Mr. Schmoller has adapted on the fly. Let me try it
5 this way to make sure that we're clear on this.

6 BY MR. MORIN:

7 Q When you look at all the boxes collectively in
8 Norton 360, you're giving 70 percent of the value to
9 malware protection and 30 percent to everything else,
10 correct?

11 A That is correct for Norton 360.

12 Q Okay.

13 MR. MORIN: Thank you, Your Honor. The boxes
14 were in the wrong place. The point was the same.

15 BY MR. MORIN:

16 Q 70 for the blue, 30 for the yellow, fair?

17 A For Norton 360.

18 Q Okay. Now, you justified increasing the number on
19 your direct examination in saying you could charge
20 different customers more money for the same feature in
21 part based on what you did at McAfee, correct?

22 A Yes. And what I did at McAfee was standard
23 industry practice to do a markup of features in
24 premium products.

25 Q And your point was you could get away with

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1 charging some customers two to three times more money
2 than other customers for the exact same feature,
3 correct?

4 A I don't know if I used that exact wording. As you
5 go to a new product, a premium product, you can go in
6 and do a markup on those features based on the premium
7 product.

8 Q Right. So the same feature would cost more money
9 for someone who was less price sensitive and bought
10 the more expensive product. That's your point, right?

11 A No. It's if you have a base product, and then you
12 go to a premium product, those features that you're
13 adding to the premium product, you wouldn't just
14 account for their price. You would do a markup on
15 that price to account that they are in a premium
16 product.

17 Q Right. And you called this in your report price
18 discrimination, right?

19 A I believe so.

20 Q Right. And you say that discriminatory price
21 practices are common in the cybersecurity industry,
22 discriminating the prices, right?

23 A Can you show me where in the report?

24 Q Sure. Let's go to page 248 of the 2019 report.

25 A Did you say page 248?

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1 Q Paragraph 248.

2 A I was going to say it doesn't have that many
3 pages.

4 Q Paragraph 248.

5 THE COURT: We're still in '19?

6 MR. MORIN: Correct, Your Honor.

7 BY MR. MORIN:

8 Q And you say you consider the price differential
9 between AntiVirus and Internet Security and then
10 discount the differential by an appropriate factor to
11 compensate for price discrimination. You call it
12 price discrimination, right?

13 A Yes. That's the term that's used in the industry.

14 Q And you don't point to a single article to support
15 this proposition that there's price discrimination in
16 the computer software industry, do you?

17 A For that bullet, no, I do not.

18 Q And you know Norton produced millions of pages of
19 documents in this case. You're aware of that?

20 A I know they produced a lot of documents. I don't
21 know the exact number.

22 Q Thousand of pages of marketing and financial
23 documents, you're aware of that?

24 A I have seen a lot of documents.

25 Q Including documents about Norton's pricing

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1 strategies, right?

2 A My main focus was on -- what I presented in my
3 direct was more the differentiation of SONAR/BASH. I
4 didn't really get into detail on the pricing
5 documents.

6 Q You don't cite a single Norton document that
7 supports the proposition that it engages in what's
8 called price discrimination. You don't cite a single
9 document from the case, do you?

10 A No, I do not. It's based on my professional
11 experience.

12 Q And you read and considered 14 different Norton
13 employee depositions, right?

14 A I don't know the exact number, but I considered
15 many depositions.

16 Q And you don't cite to a single line of a single
17 deposition supporting the proposition that Norton
18 engaged in price discrimination, correct?

19 A That's correct. It was based on my professional
20 experience.

21 Q In fact, the only thing that you cited to was your
22 experience at McAfee on this point, correct?

23 A That is correct.

24 Q And say that you discriminated at McAfee, so there
25 must be discrimination at Norton, right?

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1 A It was based on McAfee and my experience working
2 across many different software companies.

3 Q All you cited to was McAfee in your report, fair?

4 A I believe I mentioned McAfee. I don't know if
5 it's exclusive to McAfee.

6 Q Okay. And you were at McAfee for less than two
7 years, right?

8 A About two years, yes.

9 Q Over a decade ago?

10 A I guess it's been that long, yes.

11 Q And you were the CTO or chief technology officer
12 of the Americas, right?

13 A That is correct.

14 Q And that's a high position with the company,
15 right?

16 A Yes, it is.

17 Q And you report up to the chief technology officer
18 worldwide, right?

19 A I reported both to the CTO and the CEO.

20 Q And you understand that we don't have access to
21 your emails from McAfee and the documents you had at
22 McAfee, the things you did there. You understand we
23 can't see that, right?

24 A That is my understanding.

25 Q So you understand when you say "I did it at

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1 McAfee," you're basically saying to the jury, Trust
2 me. We have no way to test it. We have no documents.
3 There's no way we can look and evaluate and test
4 against it. You understand that?

5 A Yes. I'm here today as an expert. So I can offer
6 opinions on my expertise and experience.

7 Q I have no quibble with that. I'm saying you cite
8 a lot of documents in your report, but on this one,
9 it's basically, "Trust me. That's the way we did it
10 at McAfee," fair?

11 A This one is based on my professional experience,
12 yes.

13 Q Okay. All right. In any event, let's go back to
14 our sheet here for a second. If we could go to the
15 ELMO. And I'm going to put an alternative number
16 down.

17 In 2014, your numbers were 53 to 70 percent. We
18 talked about that. That was a range that you offered
19 in 2014, correct?

20 THE COURT: It would be a lot less confusing
21 if you put 2014 above and 2019 above Columbia and
22 alternative.

23 MR. MORIN: I'd be happy to.

24 THE WITNESS: Your Honor, you read my mind.
25 I was thinking the same thing.

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1 BY MR. MORIN:

2 Q And some of these are going to be different. So
3 I'm going to put here that this is 2014, fair?

4 THE COURT: Just put it above.

5 MR. MORIN: Your Honor, I'm going to do other
6 things in my alternative chart that may not all be
7 2014, Your Honor.

8 THE COURT: Okay.

9 BY MR. MORIN:

10 Q So I want to make it clear to everyone so we have
11 a clear report. Your number in 2019 was 60 to
12 95 percent. In 2014, it was 53 to 70 percent, fair?

13 A Just so we don't confuse the jury, can we cross
14 off that source of '14 because that implies it's for
15 the entire line.

16 Q Sure. Absolutely. I will make it clear that
17 that's the source for the alternative. We have some
18 more work to do, but I'll make it clear that it's the
19 source for the alternative number. Okay?

20 A Okay.

21 MR. GUZIOR: Your Honor, I have an objection.

22 THE COURT: What's your objection?

23 MR. GUZIOR: I think the demonstrative is
24 misleading calling this category an alternative. It
25 doesn't accurately represent Dr. Cole's testimony that

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1 they were two different assignments based on two
2 different sets of evidence.

3 You obviously have different documents,
4 different testimony in 2014 versus 2019, and Dr. Cole
5 has never said it was an alternative number. I think
6 Mr. Morin's going to suggest to the jury that this is
7 the alternative when it's no such thing.

8 MR. MORIN: Your Honor, it is a demonstrative
9 exhibit. It's not coming into evidence. I can make
10 my points on a demonstrative however I --

11 THE COURT: What is it an alternative of?

12 MR. MORIN: It is the alternative for level 1
13 that he offered in 2014. We already went through
14 that. It is exactly what he offered in 2014, Your
15 Honor. I will stipulate that this is my
16 demonstrative. I'm writing these numbers.

17 MR. GUZIOR: Your Honor, shouldn't a
18 demonstrative demonstrate evidence? And if there is
19 no testimony that it's an alternative, it's just
20 Mr. Morin writing words.

21 MR. MORIN: I can write "other." Would that
22 make it better?

23 THE COURT: Well, you can write it's the same
24 level, different date.

25 MR. MORIN: Got it.

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1 Okay. We can take that down.

2 BY MR. MORIN:

3 Q All right. Now we're on layer 2 of your three
4 layers. And I promise the other two are going to be
5 much quicker.

6 In step 2, you quantify the percentage of Norton's
7 malware detection that you thought was attributable to
8 SONAR/BASH, right?

9 A That is correct.

10 MR. MORIN: Actually, let's have the screen
11 up here for a moment.

12 BY MR. MORIN:

13 Q Your current testimony was that it's 24 percent,
14 give or take. There's some 23, some 24, but
15 24 percent is fair, correct?

16 A It was 30 percent, but then, yes, there was an
17 adjustment that the number I used was 24 percent for
18 SONAR.

19 Q Okay. And you talked about four levels of
20 protection in your direct examination, right?

21 A That is correct.

22 Q And then you ended up giving this level about
23 24 percent, which is about a quarter of the overall
24 attribution to malware, fair?

25 A That is correct.

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1 Q Okay. And you'd agree with me that not all
2 features are necessarily created equal. Just because
3 there's four buckets, you can't just say a quarter
4 each. I think you'd agree on that, right?

5 A Correct. And that's where I did the analysis to
6 confirm that.

7 Q Right. And we looked at the block data, and that
8 actually is your demonstrative. Let's take a look at
9 that.

10 MR. MORIN: If we could switch, please.
11 Thank you. And if we could put it on the screen,
12 please.

13 BY MR. MORIN:

14 Q Your demonstrative -- and you talked about this in
15 direct examination, right?

16 THE COURT: Where is this from? What slide?

17 MR. MORIN: This is Slide 39 from Dr. Cole's
18 direct examination.

19 THE COURT: Okay.

20 BY MR. MORIN:

21 Q And you looked at this on direct examination and
22 talked us through it, right?

23 A That is correct.

24 Q And BASH overall blocked .8 percent of the malware
25 that was blocked, right?

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1 A In '13, yes.

2 Q And for the corporate product, it was 0.1 percent,
3 right?

4 A Remember, though, that's when it just rolled out
5 in the enterprise version. So those numbers could be
6 skewed for the year because it came out halfway
7 through the year.

8 Q Halfway through 2013? Or was it 2012?

9 A Apologize. I'm getting my hypothetical
10 negotiations and my dates confused a little. I
11 withdraw that. It was 2011, yes.

12 Q So it was 0.1 percent of the blocks in the
13 corporate product were made by BASH, right?

14 A That is correct.

15 Q And you gave it approximately equal value with the
16 others. It's 24 percent, some 30, some --

17 THE COURT: Okay. I'm sorry. Now you lost
18 me. I thought the hypothetical dates were 2011 and
19 2013.

20 MR. MORIN: Correct.

21 THE COURT: '11 for consumer, '13 for
22 enterprise.

23 MR. MORIN: 2011 was the first issued patent,
24 Your Honor. 2013, the second issued patent.

25 THE COURT: All right. And when did

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1 enterprise unroll?

2 THE WITNESS: 2011. And then consumer was
3 2009.

4 THE COURT: Got it. Thank you.

5 MR. MORIN: Thank you, Your Honor.

6 THE COURT: Sure.

7 BY MR. MORIN:

8 Q But you gave them all about equal weighting,
9 24 percent, 30. You ended up giving them close to
10 equal weighting, fair?

11 A I guess -- and I believe I gave the detailed
12 explanation it's the quantity versus quality. We saw
13 many slides that showed that Network, Antivirus, and
14 Insight all missed threats. And if it wasn't for
15 BASH, it would have been a guaranteed infection.

16 So the low number is not a representation because
17 it's catching the advanced threats that everything
18 else is missing.

19 Q Right. And you showed the jury a slide that said
20 90 percent of the sophisticated -- or I'm sorry --
21 polymorphic viruses -- you called them newly-created
22 polymorphic viruses, 90 percent were caught by Insight
23 or BASH. You showed the jury that, right?

24 A I believe that actually was an email within
25 Norton, not a slide presentation.

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1 Q And between Insight and BASH, it's about fivefold
2 Insight to BASH, right, if we look at this slide?

3 A Correct, because the order they go, BASH is the
4 last line of defense.

5 Q Sure. And we have data on the enterprise
6 customers, and we know that about 25 percent of
7 enterprise customers, even though the default is for
8 BASH to be on, actively turn it off. Are you aware of
9 that?

10 A I know that some do. I don't recall the exact
11 number.

12 Q Let's take a look at your report. Paragraph 287.

13 MR. MORIN: 2019 report, Your Honor. I'll
14 get better at this.

15 BY MR. MORIN:

16 Q And it's paragraph 287. And if we look at the
17 top.

18 MR. MORIN: And if we can close it. Let's
19 just look at the table, Mr. Schmoller.

20 BY MR. MORIN:

21 Q This is from your report, and we see that
22 30 million customers have it installed and enabled,
23 6.5 million have it installed but disabled, and
24 4.4 million have it not installed. So it would be
25 more than 25 percent of people in the enterprise world

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1 are not running SONAR/BASH even though it was
2 defaulted on, right?

3 A That was from the interrogatory response in 2014.

4 Q Which you cite in your report.

5 A Yes, I do.

6 Q So let's just talk about this.

7 MR. MORIN: I'm in airplane mode, Your Honor.

8 BY MR. MORIN:

9 Q If I go to my phone and the ringer is set to
10 whatever the ringer is, we could do sounds. And we
11 have a ring tone, and it's set to that ringer. That's
12 the default. It's what we call a default ring, right?

13 A I don't know what the default ring tone is on an
14 iPhone. I'm assuming that is.

15 Q So a quarter of the people not only were neutral
16 about having SONAR/BASH, but they actually went to the
17 trouble to turn it off or disable it. Do you
18 understand that?

19 A For enterprise customers, which would be expected
20 because some of them do have some privacy concerns.

21 Q They switch to a different ring tone. They
22 switched to something else. They turned it off,
23 right?

24 A I'll testify they turned it off. I'm not
25 following the ring tone example, but enterprise

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1 customers are sometimes concerned with privacy. So it
2 would be expected some of them would turn it off.

3 Q They didn't turn the other three layers off, did
4 they?

5 A I would have to check on that.

6 Q Okay. You certainly haven't opined on how often
7 they turned off the other three layers. You haven't
8 opined on that, right?

9 A That's correct.

10 Q Okay. Let's go back to Mr. Nachenberg one last
11 time. And you relied on his testimony about
12 70 percent. Let's go to your Slide 58 and put it up
13 on the screen. And you put this in in your direct
14 examination as 70 percent of the product, the value
15 being attributed to malware. Do you know what the
16 next lines of his testimony were, sir? Do you
17 remember?

18 A No, I don't.

19 Q Let's put them on the screen. Let's go to
20 Nachenberg, and let's look at the very next lines.

21 MR. MORIN: Maybe we could pull that up.

22 BY MR. MORIN:

23 Q We finished at 233, 24 or 12. Let's go to 234,
24 line 13.

25 THE COURT: Wait. This says this is from

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1 233, 16 through 24.

2 MR. MORIN: This is his last -- his last
3 testimony that we relied was 233, 16 to 24. I'm
4 sorry. It continues on on the same subject on the
5 next page, I should clarify. Let's look at his next
6 testimony on the next page.

7 THE COURT: So it's the next question. It's
8 not the same question.

9 MR. MORIN: Correct. Absolutely, Your Honor.

10 BY MR. MORIN:

11 Q You didn't cut off a question. Let's look at the
12 next question. And you didn't cite to this in your
13 direct examination, right?

14 A No, I did not.

15 Q And you didn't cite to this in your report, did
16 you?

17 A I do not believe that I did.

18 Q And he was asked in the same series of questions
19 that you relied on him to say 70 percent was the value
20 of malware. He was then asked what percentage of the
21 value of protection is contributed by BASH
22 machine-learning? And you gave the answer of,
23 "4 percent of that 60 or 70 percent," right?

24 A He says, If I were to guess, 4 percent of the 60
25 to 70.

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1 Q And he also said earlier on the 70 percent, he
2 said "I don't know." And he was asked to give his
3 best assessment, and he relied on 70 percent, right?
4 Do you remember that?

5 A Once again, in the report, I don't rely on it. I
6 use it as a spot check in 2019, as a validation point.
7 So I don't rely on it. I just use it as a validation.

8 Q Okay. But his very next question and answer goes
9 to level 2, and he says it's 4 percent, right?

10 A That's what he does say.

11 Q Okay. Let's put that on our sheet. If we could
12 go to -- for the jury's effort, I am writing this.
13 This is my writing, not his. But we have 4 percent is
14 what Nachenberg testifies to for level 2. Correct?

15 A Just for the record, I think this is very
16 misleading on how it's being written, but he did say
17 4 percent that I guess.

18 Q So Nachenberg is at 4 percent on level 2. Level 3
19 will be quick, I promise.

20 THE COURT: Well, let me ask you this: Is
21 there a timeframe where he says 4 percent?

22 MR. MORIN: It is equally unbounded as the
23 70 percent that the doctor is relying on in his
24 slides.

25 MR. GUZIOR: Your Honor, Dr. Cole just

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1 testified he didn't rely on this.

2 THE COURT: Right. I'm going to say, you
3 know, he's corrected you many, many times. You keep
4 saying you relied on it, and he keeps saying he did
5 not. So you're putting the word "rely" into his
6 mouth, and I've let you do it for about a half an
7 hour. And I'm going to ask you to stop doing that,
8 please.

9 MR. MORIN: I apologize, Your Honor. I
10 should phrase it better. It's getting late in the
11 day.

12 THE COURT: Yes. You should be phrasing it
13 better now.

14 MR. MORIN: Okay.

15 BY MR. MORIN:

16 Q The 70 percent was cited in his report. We could
17 put it that way. And we can move on from that. We
18 can take that down off the screen.

19 All right. Let's go to level 3, and that's where
20 you calculated the value of the patented technology
21 relative to SONAR. And you put that, and you say
22 level 3 is 35 percent, correct?

23 A That is correct.

24 Q Okay. If we could go to the ELMO. Okay. I've
25 written that on the ELMO. So we can agree on the

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1 following.

2 MR. MORIN: If we can take that down. Thank
3 you.

4 Q That in order to do the level 3 analysis, we need
5 to know what the scope of the claims of the patent
6 are, fair?

7 A That is correct.

8 Q Okay. What they do and do not cover, right?

9 A That is correct.

10 Q And let's just reorient ourselves. Let's put the
11 '115 Patent on the screen. That's PX188. We've seen
12 this a little bit. I won't take too long, but we
13 don't compare what Norton is doing with the cover page
14 or with the -- if we scroll through it -- with the
15 written description, the drawings, and those types of
16 things. It's important that we compare it to the
17 claims; is that fair?

18 A I need to know the context of your question.

19 Q For level 3, when we're determining the value, we
20 don't look at the written description or the drawings.
21 We look at the claims of the patent, fair?

22 A That is correct.

23 Q Okay. And if we look at the claims of the patent,
24 and the claims are kind of like the fence around the
25 property, if you will. There is a video the jury was

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1 shown. But you're familiar with patents. It's

2 generally like the boundaries, right?

3 A Correct.

4 Q Okay. And there's four claims asserted here in

5 this case, right?

6 A Yes, there are.

7 Q And there's one claim asserted on the '115 Patent,

8 right?

9 A That is correct.

10 Q Out of the 42 total claims in that patent, right?

11 A That sounds about right.

12 Q And there's three claims of the other patent, the

13 '322, out of 27 claims, right?

14 A I believe that to be correct.

15 Q All right. So let's look at Claim 2 of the '115

16 Patent. And Count 2 is what's called a dependent

17 claim. Do you understand that?

18 A Yes, I do.

19 Q And it includes all of the elements of Claim 1

20 plus some additional elements, right?

21 A That is my understanding of a dependent claim.

22 Q And dependent Claim 2 says it further comprises

23 creating a combined model from at least two models

24 created using different computers. Do you see that?

25 A Yes, I do.

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1 Q Okay. And Claim 1 is not being asserted against
2 Norton. You understand that?

3 A That is my understanding.

4 Q All right. And so there's no allegation that
5 Norton's product infringes Claim 1. You understand
6 that?

7 A Once again, I'm not here to offer an infringement
8 opinion. I would defer to Dr. Bailey for that.

9 Q Okay. You agree that you can perform the method
10 of Claim 1 without performing the additional
11 limitation of Claim 2, right?

12 A Can you repeat that question?

13 Q I'll move on.

14 A Okay.

15 Q In your 2014 report, you also assigned 35 percent
16 as your apportionment on level 3, right?

17 A That is correct.

18 Q Now, most of your discussion of level 3 with this
19 jury, please correct me if I'm wrong, you talked
20 about, and I wrote it down, you said that the combined
21 model was the core technology of the four asserted
22 claims. That's what you kept telling the jury?

23 A Something similar that, yes. All of the value of
24 the patents come from the combined models.

25 Q Right. And you told -- is this a fair

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1 characterization, not of your testimony, but is this a
2 fair statement that you believe using the combined
3 models is the core technology of the four asserted
4 patent claims, is that fair?

5 A I would put it a little differently. That all of
6 the value of the patents that are added to BASH come
7 from the combined models.

8 Q Okay. And you originally, like we said,
9 apportioned 35 percent in your 2014 report on level 3
10 as well, right?

11 A That is correct.

12 Q Okay. And in level 3 -- your 2014 report, if we
13 want to turn to it, is 117 pages long. Are you aware
14 of that? You can take a look and verify it.

15 THE COURT: Which report?

16 MR. MORIN: 2014, Your Honor.

17 A It appears to be 117 pages.

18 Q Okay. If we could go to the ELMO, please. I'm
19 going to just do this on the sheet.

20 Now, I looked through the report and did a word
21 search and --

22 MR. MORIN: A moment's indulgence, Your
23 Honor. I'm almost done.

24 BY MR. MORIN:

25 Q And in this 117-page report, I was able to find a

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1 sum total of one sentence that discussed combined
2 models. Do you agree with that?

3 A Yes, I would.

4 Q Okay. There is no other place in the report that
5 uses the words combined models, combined models on
6 different computers, all the language you just used
7 with the jury in 2014, correct?

8 A First, I believe the word "combined models,"
9 because I did a similar search prior, I believe it
10 does appear multiple times, more than one, but also
11 the concept. I might not say combined models, but the
12 description of what a combined model is does appear
13 throughout the 2014 report.

14 Q I will invite your counsel on redirect to show us
15 any other instances of the words combined models,
16 combining models, combined from different computers.
17 Of course, he'll have the chance to do that.

18 One last thing before we finish, and you've been
19 very patient, and you all have been very patient. One
20 last thing before we finish. In your -- first of all,
21 I'm going to go ahead and mark for identification
22 purposes only the handwritten table I was making
23 DX-ED, just for the record.

24 Let me go ahead and put up your chart. And I want
25 to just do some math. I understand you may disagree

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1 with the premise, but I want to do some math.

2 If we were to multiply, on the business, your 2014
3 report number of 60 percent times Mr. Nachenberg's
4 testimony about 4 percent, and even if we use
5 35 percent here, the number is 0.84 percent. Do I
6 have that math? Look okay? I can do it on a
7 calculator. But do you take me on that?

8 THE COURT: Do you know what exhibit this is,
9 what slide it is?

10 MR. MORIN: Yes, Your Honor. It's Slide 85,
11 Your Honor.

12 THE COURT: Okay. Thank you.

13 A Once again, I don't have a calculator. Generally,
14 the math seems okay. But for the record, I don't
15 agree with those numbers. You're mixing apples and
16 oranges and just sort of putting random numbers on the
17 screen.

18 Q I didn't expect that you'd agree. I'm just making
19 sure the math is right. If we use your 2014 report
20 number, and then Mr. Nachenberg's 4 percent testimony,
21 we get to 0.84 percent, right?

22 A I don't have a calculator. So like I said, it
23 generally looks okay, but --

24 Q Sorry. That's my family. Let's do the math. .6
25 times .04 times .35 equals --

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1 THE COURT: How about you just put it in, and
2 we don't look at your family, and all that other
3 stuff.

4 MR. MORIN: Of course, I'll take the
5 calculator off.

6 BY MR. MORIN:

7 Q I have to do the math. Sorry. I get .84 percent.
8 Okay?

9 A You ran the calculation. So I did not run it.

10 Q Okay. And if we do the other numbers, and we use
11 your 2014 numbers of .53 to --

12 THE COURT: We can't see where you're
13 writing.

14 MR. MORIN: Sorry. .53. It's 53 percent, I
15 should say. 53 to 70 percent. That's 2014. Plus
16 Mr. Nachenberg. And we'll use 35 percent again. We
17 get 0.74 percent to 0.98 percent. You trust me on the
18 math there?

19 A Generally on the math, but once again, you're just
20 putting random numbers and just doing random
21 calculations. So to me there's no foundation for what
22 you just put up there.

23 Q I understand. But if we then multiply and use
24 your original report numbers, we use Mr. Nachenberg's
25 testimony, we get to these numbers, and that would

1 reduce, even before we get to Dr. Sullivan tomorrow,
2 the damages they're asking for from 227 million to
3 less than \$30 million. Are you aware of that?

4 A I'm not aware of the numbers on the damage's side,
5 and I don't agree with the assessment for the numbers
6 on the slide.

7 MR. MORIN: I'm going to go ahead and mark
8 for identification purposes only, this is DX-EE, which
9 is a demonstrative exhibit for the record. I have
10 taken far longer than I thought I would. I want to
11 thank you for your time, Dr. Cole, and I tender the
12 witness.

13 Thank you, Your Honor.

14 Thank you for your time.

15 THE WITNESS: Thank you, sir.

16 THE COURT: All right. Will there be
17 redirect?

18 MR. GUZIOR: Yes, Your Honor, probably 15
19 minutes.

20 THE COURT: I don't think we go on any more
21 today. It's 5:30. We've had a lot of numbers. And
22 so, ladies and gentlemen of the jury, we're going to
23 do redirect tomorrow morning, nine o'clock.

24 So, again, please don't talk to each other or
25 anybody else or look stuff up. And we'll see you in

1 the morning. And we appreciate your good attention.

2 (The jury exited the courtroom at 5:25 p.m.)

3 THE COURT: Is there anything else we need to
4 cover before we break?

5 MR. MORIN: Ever so briefly, Your Honor. I'm
6 sure you're tired of hearing from me.

7 On Dr. Jaeger, we will email, as I said, the
8 Q and A. There is a possibility, just to give the
9 Court a heads-up, we're going to look at what's left
10 after the *Dauberts* and the MILs, and we will also
11 email, Your Honor, if we decide to forego him on
12 apportionment. But we will let you know either way so
13 that you're not waiting and expecting something, Your
14 Honor.

15 THE COURT: All right. Now, Mr. Morin, did
16 you notice when I told you you were giving improper
17 foundational questions, did you notice that you put up
18 a demonstrative that was misleading as it was
19 initially put up? And you said, "Ah, I'm so sorry. I
20 just need to put it on a different side." You have to
21 stop doing that.

22 MR. MORIN: Your Honor --

23 THE COURT: It is actively misleading. It
24 was misleading as it was, and I want you to stop that.
25 You must have asked him 10 times that he relied on it,

1 and that's okay in some cross-examination, but you
2 can't keep saying it when he's correcting you 15 or 20
3 times.

4 MR. MORIN: Your Honor, Your Honor, very
5 respectfully, if I may, Your Honor. The boxes and the
6 legends were in the wrong spot. I was not trying to
7 mislead anything.

8 THE COURT: You had lots of time to prepare
9 it, just like you said the other side did. And I have
10 told you do not put things in a manner where they can
11 be misleading. And so now you're saying, "Ah, I'm so
12 sorry." Don't do it again. Do you hear me? Not by
13 accident, not respectfully, not any way. Do not do it
14 again. I will instruct the jury that you are doing
15 that too many times, and they should take it into
16 account. I'm telling you that.

17 MR. MORIN: I understand, Your Honor. I will
18 tell you, as an officer of the court, I intended
19 nothing misleading. The boxes were in the wrong spot.
20 The color coding on the boxes was spot on. Blue was
21 30 percent, yellow was 70 percent. It was not --

22 THE COURT: I will make the factual finding I
23 saw it as misleading. It was under the Norton
24 AntiVirus. Colors or not, it was under the block of
25 Norton AntiVirus. And I will make the factual finding

1 it was misleading. Whether you intended or not, it
2 was. And I'm telling you to be more careful.

3 MR. MORIN: All right. I will be more
4 careful, Your Honor. I will tell you only, I hope you
5 accept this, I will tell you only with everything I
6 have, it was not intended as such. I won't dispute --

7 THE COURT: I just don't want to hear that
8 from you guys anymore. I don't want to hear from you
9 all. Just get it right.

10 MR. MORIN: Okay. Thank you, Your Honor.

11 THE COURT: All right. Is there something
12 else we need to cover?

13 MR. BEENY: I'm sorry. I'm sorry to keep
14 the Court, but I do want to note, Your Honor, and let
15 counsel know as well, that last chart with the
16 apportionment numbers, we may ask Your Honor to give
17 the jury an instruction tomorrow to disregard it. It
18 is nothing but math. There is no expert testimony
19 that the correct apportionment is going to be below
20 1 percent.

21 That 4 percent number that counsel used to
22 create the mathematical equation with a witness who
23 kept on telling him that he wouldn't agree with this
24 and yet he created it anyway comes from Mr. Nachenberg
25 who said it was a guess. There is no expert testimony

1 that's going to support that. There is no factual
2 testimony that this is correct. It is creating an
3 apportionment number that is entirely bogus. And
4 after doing a little research tonight, Your Honor, I
5 expect that we will ask Your Honor to instruct the
6 jury that they are to disregard those apportionment
7 numbers.

8 MR. MORIN: Your Honor, that's entirely
9 proper cross-examination. I made it clear it was my
10 demonstrative. I let the witness say that he
11 disagreed with it. I am allowed to cross-examine the
12 witness. And Your Honor, in your most recent ruling,
13 said I could cross as to the apportionment, and I can
14 go into those things. Of course, they can argue, and
15 I expect the redirect --

16 THE COURT: What did I say? Exactly what did
17 I rule?

18 MR. MORIN: You ruled that we could
19 cross-examine. I have the ruling here. Just a
20 moment, Your Honor. I don't have the right ruling.

21 THE COURT: Well, then how about you write a
22 couple paragraphs with citations about why it's
23 proper. And you all write a couple paragraphs with
24 citations about why it's improper. And you give that
25 to me. You can do that tonight.

1 MR. MORIN: Of course.

2 THE COURT: I want it tonight. And then I
3 will review what you all say, and I will rule in the
4 morning.

5 MR. MORIN: Thank you, Your Honor.

6 MR. BEENEY: Just to -- I'm sorry. I can't
7 help myself, but I can't walk out of the courtroom,
8 flag down a car and ask somebody what they guess is
9 the value to a product, and then put it in front of
10 the jury and ask the jury to consider it. And what
11 was just done is no better than that.

12 MR. MORIN: I could not disagree more, Your
13 Honor. They put up in direct examination the prior
14 page where he also said it was a guess, an estimate.
15 They put up exactly the same category of testimony,
16 just on one level and not the other.

17 MR. BEENEY: With the witness saying he
18 didn't rely on it.

19 MR. MORIN: Sure. He didn't rely on it. I'm
20 allowed to cross-examine him on relying on one page
21 but not relying on the other. Of course I am, Your
22 Honor.

23 THE COURT: Submit it on paper.

24 MR. MORIN: Thank you, Your Honor.

25 (Recess taken at 5:32 p.m.)

1 THE CLERK: This is Kathy Hancock, Judge Lauck's
2 courtroom deputy. We are here today, April 19th, to
3 confirm exhibits and demonstratives. And we have --

4 MS. ROWLAND: Rebecca Rowland with Columbia.

5 MS. NGUYEN: Laura Nguyen from Norton.

6 THE CLERK: We'll start with Eric Cole exhibits,
7 and they are PX-325, PX-316, PX-315, PX-501, PX-170,
8 PX-349, PX-530, PX-504, PX-362, PX-506, PX-486, PX-350,
9 PX-511, PX-607, PX-132, PX-506, PX-482, PX-192, PX-132.

10 And then on cross, we have PX-325, PX-511, and
11 PX-188.

12 And as demonstrative exhibits, we have DX-EC,
13 DX-EB, DX-ED, and DX-EE.

14 MS. ROWLAND: I have some additional ones from
15 Cole's direct. PX-466, PX-490, PX-196, PX-323.

16 THE CLERK: Did you have those as well?

17 MS. NGUYEN: I have those.

18 THE CLERK: Okay.

19 MS. ROWLAND: That's my complete list.

20 THE CLERK: Okay. We're good.

21 (The trial adjourned at 5:39 p.m.)

22
23 REPORTER'S CERTIFICATE

24 I, Tracy J. Stroh, OCR, RPR, Notary Public in and for
25 the Commonwealth of Virginia at large, and whose

1 commission expires September 30, 2023, Notary Registration
2 Number 7108255, do hereby certify that the pages contained
3 herein accurately reflect the stenographic notes taken by
4 me, to the best of my ability, in the above-styled action.

5 Given under my hand this 19th day of April 2022.

6
7 /s/

Tracy J. Stroh, RPR

8 /s/

9 Krista Liscio Harding, RMR

10 /s/

11 Diane J. Daffron, RPR, CCR
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